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CONTENTS

SELECTIVE SERVICE—1948 ---------- The Honorable Kenneth C. Royall, Secretary of the Army 3
AN OBSERVER WITH EXERCISE YUKON ---------- Lt. Col. R. E. Moore, *Inf* 12
MILITARY JUSTICE PROCEDURES ---------- Maj. Gen. T. H. Green, The Judge Advocate General, *USA* 21
THE INDUSTRIAL COLLEGE OF THE ARMED FORCES ---------- Lt. Col. J. G. Ondrick, *Inf* 28
THE ARMISTICE OF CASSIBILE ---------- Dr. H. McGaw Smyth 36
THE PUBLIC INFORMATION OFFICER ---------- Lt. Col. J. H. Minton, *Cav* 44
SUPPLY BUILD-UP IN AMPHIBIOUS OPERATIONS ---------- Lt. Col. L. W. Bernard, *Inf* 49
NEW NAMES FOR OLD IDEAS—INTELLIGENCE PLANNING ---------- Col. T. F. Van Natta, III, *Cav* 57
MILITARY NOTES AROUND THE WORLD ---------- 63
FOREIGN MILITARY DIGESTS ---------- 73
The War of Paper ---------- 73
The Politico-Strategic Problem of Korea ---------- 78
German Air Support ---------- 82
Russian Tanks in Pursuit ---------- 84
The Principles of War ---------- 88
Search Operations in Palestine ---------- 90
Scientific Intelligence ---------- 96
Problems of Organizing the Brazilian Air Force ---------- 103
German Airborne Troops in Combat ---------- 106
The Future of the Battleship ---------- 108
British National Service ---------- 110

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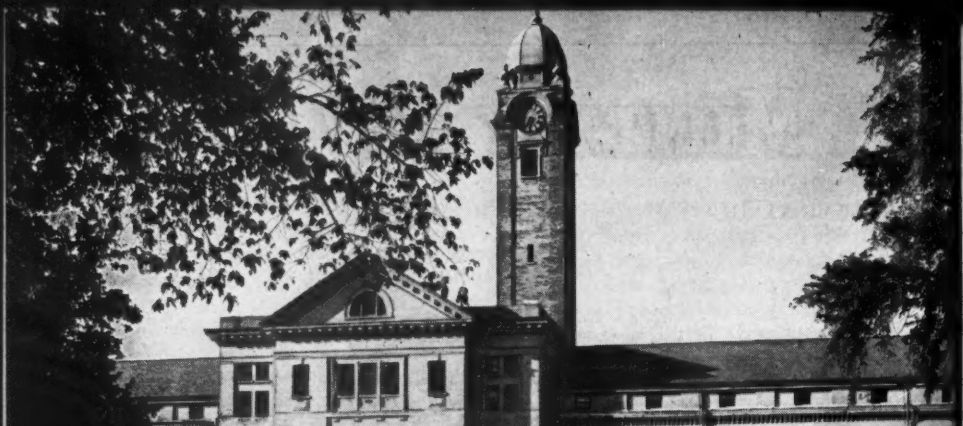

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Selective Service—1948

The Honorable Kenneth C. Royall,
Secretary of the Army

WHILE the enactment of the new Selective Service Act directly affects the Army, Navy and Air Force, for the first few months of the operation of the law practically all of the selectees will be assigned to the Army. The somewhat limited immediate requirements of the Navy and Air Force will probably be met by voluntary recruitment under existing procedures.

The enactment of the new Selective Service Act directly affects the Army, Navy and Air Force. It is my opinion, however, that for the next few months at least, practically all the selectees will be assigned to the Army, since the immediate personnel requirements of the Navy and Air Force probably will be met by voluntary recruitment under existing procedures.

Accordingly, I have asked the Army to outline to the public the general plan for the training and utilization of the men allocated to the Army through the operation of this new law.

The Honorable James V. Forrestal, *Secretary of Defense*

Since the Army will be the national defense agency which will receive the great majority of the men inducted under the law, it seemed appropriate that I should give a general outline of the plan for the training and utilization of the men to be allocated to the Army.

Personnel Requirements

The present strength of the Army is 542,000. Under the authority of the new Selective Service Act it may be increased to 837,000, by means of voluntary enlistments and inductions under the new law. However, 1949 appropriations limit the total number to 790,000 between now and 1 July 1949. In addition to this number, the Army is authorized to accept 110,000 18-year-old volunteer trainees for one year's active training and service.

Men inducted by Selective Service will serve twenty-one months. Regular volunteers will be accepted for varying terms, but it is hoped to secure as many long-term enlistments as possible.

Army Organization

When the Army is brought fully up to its new authorized strength we will be able to organize for the first time since the close of hostilities a really effective mobile striking force, small but still effective. This force will consist of twelve Regular Army divisions, six National Guard divisions and supporting combat and service troops of the Regular Army, National Guard and fully organized units of the Organized Reserves. The divisions will be completely organized, maintained at full strength and will have such priority in

training and supply as to make them immediately available for use. The National Guard and Organized Reserve units will not be on active duty in Federal service, but the state of their training and equipment, as far as possible, will be such as to permit their immediate utilization on call of the President.

In addition to the divisions, the force will include antiaircraft artillery and other supporting combat and service troops to enable it to function as a balanced D-day force.

These troops would be prepared in an emergency to protect some of our most vital military installations in the United States and, in conjunction with our Navy and Air Force, to seize and occupy overseas areas from which air attacks could be launched against our cities and essential industries. The capabilities of such a force are strictly limited by its strength. However, if war should come, this force would be of the greatest importance as an effective mobile striking force during the vital days of initial hostilities while our Armed Forces are being mobilized.

The Regular Army Divisions in the United States included in this force are:

2d Infantry Division, Fort Lewis, Washington.

3d Infantry Division, Fort Benning, Georgia.

8th Infantry Division, less one Regimental Combat Team, Camp Campbell, Kentucky. This combat team will be at Fort Devens, Massachusetts.

82d Airborne Division, Fort Bragg, North Carolina.

2d Armored Division, Camp Hood, Texas.

There will be a sixth division in the United States—an Airborne division—whose identity and station has not yet been determined.

The six National Guard Divisions will be:

26th Infantry Division, Massachusetts.

28th Infantry Division, Pennsylvania.

31st Infantry Division, Alabama and Mississippi.

43d Infantry Division, Connecticut, Vermont and Rhode Island.

45th Infantry Division, Oklahoma.

49th Armored Division, Texas.

Supporting combat and service units of varying size will be from the Regular Army, National Guard and Organized Reserves.

For the elements of this mobile striking force on active duty in this country and the necessary troops to man various installations and to provide the administrative and supply overhead in continental United States, 550,000 men will be required. The remainder of the Army will continue as occupation troops in Europe and the Far East and to provide garrisons for Panama, Hawaii, Alaska, Puerto Rico and other overseas stations.

Procurement of Personnel

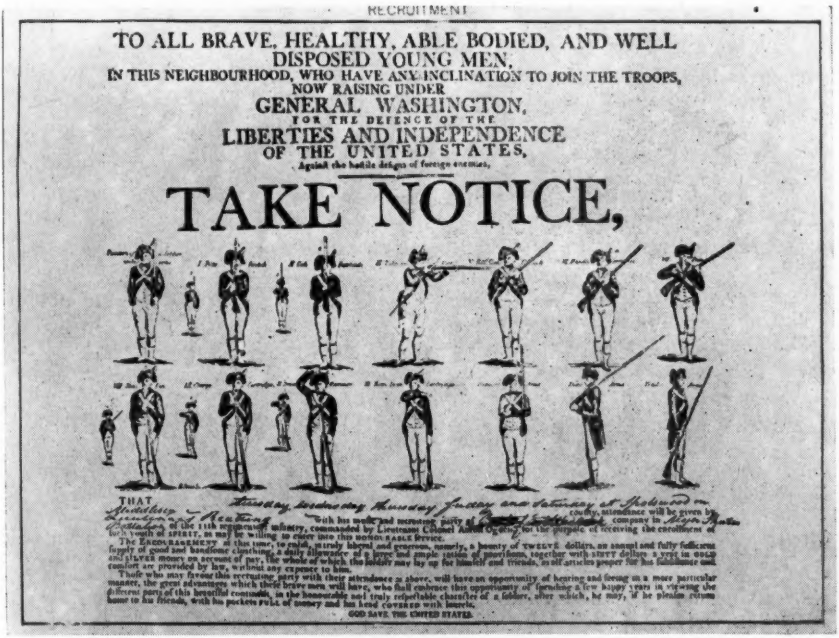
Under the terms of the Selective Service Act inductions can be started on 22 September, ninety days after approval by the President. It is expected that the first inductions will probably be about that time. Both before and after this date the Army will continue its intensive recruiting campaign with a view to securing the maximum number of volunteers.

Subsequent to the passage of the law by the Congress and prior to its approval by the President, large numbers enlisted in the National Guard for three years. This has brought the Guard up to approximately the full strength contemplated for the coming fiscal year, and it will not be required as at present to devote a great deal of its attention to recruiting and will thus be free to concentrate all of its energies on training. Practically all of its units, expanded by the recent influx of recruits, will receive intensive

field training during the next two months.

Under the provisions of the Selective Service Act men who serve less than three years on active duty in the Army (thirty-three months in the case of extended terms of inductees) will be transferred to the Reserve components on termination of their active service. This will make it possible to increase substantially the effective strength of our Reserve components and will be a material contribution to national security.

The initial call for inductions will be relatively small. The size of subsequent calls will be controlled by the rate of voluntary enlistments in the Regular Army. Men called by Selective Service will be only in such numbers as are needed to make up the difference between voluntary recruitment and scheduled requirements. The number of Selective Service inductions required each month is estimated to be 30,000—the figure being determined in light of voluntary recruiting experience. These monthly increments as far as possible will be uniform and so planned as to bring the Army up to its full authorized strength by 1 July 1949. To provide for the expanded Army some 20,000 additional officers will be required. Most of these will be captains and lieutenants. These will include Reserve and National Guard officers who volunteer for extended active duty.


RECRUITMENT

TO ALL BRAVE, HEALTHY, ABLE BODIED, AND WELL DISPOSED YOUNG MEN,

IN THIS NEIGHBOURHOOD, WHO HAVE ANY INCLINATION TO JOIN THE TROOPS, NOW RAISING UNDER

GENERAL WASHINGTON,

FOR THE DEFENCE OF THE

LIBERTIES AND INDEPENDENCE OF THE UNITED STATES,

Against the hostile designs of foreign enemies,

TAKE NOTICE,

THAT

GOD SAVE THE UNITED STATES.

In the American Revolutionary War conscription was attempted, but there was no effective draft until World War I. Above, a Revolutionary War recruiting poster.

Training

Whether soldiers enter the Army by voluntary enlistment or through Selective

Service, they will be first sent to recruiting or induction stations near their homes. There they will be given a physical examination and a preliminary interview.

Subsequently they will normally go to one of eight training centers. On arriving at a training center the first few days will be occupied with processing, that is receiving clothing and equipment, taking innoculations, and being assigned to an appropriate training unit. Some, particularly those with prior military service, will then be assigned directly to units for training,

5th Infantry Division, Fort Jackson, South Carolina.

9th Infantry Division, Fort Dix, New Jersey.

3d Armored Division, Fort Knox, Kentucky.

New Training Divisions will be:

10th Infantry (Mountain) Division, Fort Riley, Kansas.

5th Armored Division, Camp Chaffee, Arkansas.

101st Airborne Division, Camp Breckenridge, Kentucky.

Congress proposed a draft for the War of 1812 but the idea was finally abandoned. Above, a contemporary lithographer satirizes recruits for the War of 1812.

while the remainder will remain at the centers to complete basic training.

At each training center there will be stationed a training division, charged with providing basic training for all assigned recruits. The schedules will include first aid and personal hygiene, physical conditioning, tactical training, signal communications, intelligence training, map and aerial photo reading, maintenance and field firing of weapons, and vehicle maintenance and operation.

Training Divisions now in operation consist of:

4th Infantry Division, Fort Ord, California.

17th Airborne Division, Camp Pickett, Virginia.

In addition there will be combat units of less than division size as well as service and supporting troops training at Fort Bliss, Texas; Camp Carson, Colorado; Fort Meade, Maryland; Camp Cooke, California; Fort Devens, Massachusetts; and Fort Worden, Washington.

After completing eight weeks of basic individual training, which is the same for all recruits, the soldiers will either be continued on duty in the United States or sent overseas. However, no 18-year-olds, volunteering for one year, will be sent outside the United States. On completion

30,000 VOLUNTEERS WANTED
COUNTY BOUNTY CASH DOWN - $300
STATE BOUNTY - 75
U.S. BOUNTY FOR NEW RECRUITS - 302
TOTAL TO NEW RECRUITS $ 677
U.S. BOUNTY TO VETERAN SOLDIERS - 100
TOTAL TO VETERAN SOLDIERS 777
$ 1500
HAND MONEY
RECRUIT

In the Civil War, large cash bounties were resorted to as inducement for volunteers. Above, a Civil War recruiting station in New York City in 1863. Below, a corporal is shown recruiting volunteers for the Spanish-American War.

of their basic training some soldiers will be given advanced technical training in such specialties as clerical work, cooking and mess management, mechanical work, operation of radios and various supply and administrative duties. Selected soldiers with special aptitudes will be sent to technical schools for advanced training in military specialties. Those who are sent to units will be given advanced individual and unit training in the branch to which assigned.

Principles learned in World War II and developed at the Universal Military Training Experimental Center at Fort Knox, Kentucky, have been incorporated into basic and advanced training. These principles lie in the field of leadership and discipline. Leadership in our Army is based upon better understanding of basic human relations, a development of mutual respect and trust between the leader and the soldier who performs the many and varied tasks of the army. Our concept of discipline is based upon the willing obedience of the informed soldier who, acting with his comrades, accomplishes his tasks because of his intelligent understanding of their necessity rather than through external compulsion or fear. The objective of the training will be to produce a well-coordinated, physically conditioned, mentally alert, thoroughly trained soldier, capable of efficiently performing any task to which he may be assigned.

In order to develop the individual as a soldier and as a citizen it is essential that he be given the maximum amount of personal liberty consistent with the proper performance of his duty. His training will seek to promote his individual initiative and resourcefulness, and it is our intention that these qualities not be handicapped or restricted by harsh or unnecessary discipline.

There will be opportunities for the qualified soldier, whether he enters the Army as a volunteer or through the Selective Service system, to earn promotion to any noncommissioned grade, and to be

The first effective Selective Service in American history was enacted in World War I. Above, a trainload of draftees leaving for training camp in 1917.

Two important moments in the history of American manpower mobilization are illustrated here. Above, Secretary of War Newton D. Baker draws the first number of the World War I draft. Below, President Roosevelt speaking at the first drawing by Secretary of War Henry L. Stimson, 1940.

considered for an Officers' Candidate School. Successful completion of an Officers' Candidate Course will lead to a commission in the active Reserve. Officers so commissioned will serve for the same periods of active duty and in the Reserve as other inductees. Up to 10 per cent of those completing OCS training may be designated as distinguished graduates and will be eligible for direct appointment as second lieutenants in the Regular Army.

The military equipment for training will be largely that used or developed in the recent war. Many of the latest types of weapons will not be immediately available in sufficient quantities for the Army. However, limited funds will be utilized for rehabilitation of weapons and other equipment, which will be ample in quantity and quality for training a modern army in methods and techniques, utilizing the lessons learned in the recent war and the most up-to-date concepts of the nature of warfare in the immediate future. The training doctrine is flexible and its application will be geared to the foreseeable progress of scientific developments of new weapons and other equipment.

The 18-year-old volunteers for one year's training and service, like other recruits and selectees, will be sent to training centers for processing. The first groups of these trainees will then go to major combat units for eight weeks' basic training. Insofar as possible they will remain with these combat units during their one-year term of active service. At the earliest practicable date, when facilities for this purpose become available, subsequent groups will receive their basic training at the regular training centers, after which they will go to selected combat, supporting and service units for the remainder of their year of active service. They will be given the same training and opportunities as other members of the Army, except that they will not be sent out of the United States. On the expiration of a

With the Selective Service Act of 1948 in operation, this scene of a lone selectee reporting to a Reception Center in the mobilization of 1941 will be repeated many times in future months. (All photos by US Army Signal Corps.)

year of active service these volunteers will be transferred to the Organized Reserve for a period of six years.

Off-Duty Facilities

Off-duty facilities will afford soldiers ample opportunities for recreational, educational and religious development. Every effort will be made through character guidance to encourage the strengthening of the moral fiber of the soldier and to make him a better citizen.

Facilities for competitive sports at appropriate seasons will be provided both indoors and outdoors. Educational advantages in organized classes and through correspondence courses will be continued. These will be designed to fit directly into future educational plans of the soldiers. Most of these courses are accredited by civilian high schools and colleges.

All soldiers will be encouraged to attend the church of their choice and to participate in religious services and activities. Chaplains of the various faiths will be assigned to all training centers and other stations and will devote their services to the spiritual well-being of the soldiers.

Health and Welfare

Housing is available or will be provided to furnish reasonably comfortable quarters for the expanded Army. There will be no extensive rehabilitation of existing facilities to provide unnecessary conveniences and there will be no luxuries. We will not coddle but we will provide adequacy. Simple quarters with adequate heat, light and ventilation will be available. There will be ample, well-cooked, nourishing meals of a simple, wholesome character. Adequate medical care and hospital accommodations will be provided.

Conclusion

In addition to strengthening the active forces, the Selective Service Act initiates a long-range program for the development of the Reserve components of the Army. The objective of the one-year volunteer program is to furnish trained members to the Organized Reserves in which they are obligated to serve six years. The selectees on active duty for twenty-one months will also serve in the Organized Reserves for varying periods of time.

The Organized Reserve, in addition to its important mission in supporting the mobile striking force, in time of national emergency will form the foundation upon which the manpower of the nation may be mobilized.

Full implementation of the new Selective Service Law will be difficult. There are many problems which can be readily foreseen and others will undoubtedly arise during the operation of the law. The experience gained by the Army during two World Wars will aid in solving these problems. The necessity for rigid conservation of funds and resources will limit our operations to those most essential to the training of the soldiers.

Basic plans for the expansion have been largely completed and preliminary steps have been taken for the opening and rehabilitation of camps and other installations. This work will be pushed as rapidly as is consistent with efficiency and economy. Several new organizations will be formed immediately and other units will be organized later in the year as they are required. Every effort has been made to anticipate difficulties and to make appropriate plans to obviate them.

An Observer with Exercise Yukon

Lieutenant Colonel R. E. Moore, *Infantry*
Instructor, Command and General Staff College

EARLY in 1947, Headquarters, Sixth Army, received a directive from Headquarters, Army Ground Forces, to prepare four successive maneuver elements, each consisting of an augmented rifle company of the 2d Infantry Division, to be rotated during the period 1 November 1947 to March 1948, through four successive air-transported Arctic exercises to Alaska. This was the beginning of Exercise Yukon.

The purpose of Exercise Yukon, as stated by Headquarters, Army Ground Forces, was fourfold:

To develop airtransportability methods for the Arctic.

To develop methods of training and indoctrination of ground force units for Arctic operations.

To carry out a series of maneuvers in Alaska involving airtransportability and defense of air fields.

To make observations and records of all operations in order to furnish a basis for the development of doctrines, tactics, techniques, and organization for future Arctic operations.

In an address before members of the 2d Infantry Division prior to Exercise Yukon, Dr. Paul Siple, an outstanding expert on Arctic living, and a leading member of several Byrd expeditions, re-stated the purpose of Exercise Yukon somewhat more informally: He said, "The cold is unusual, but you can defeat it . . . The objective of Exercise Yukon is to determine whether, after adequate training, a group of men can drop into an area by air, be self sufficient, and still have time left to actually fight or carry out a mission. That is the one big question we are trying to answer. This exercise will be a success if, on the final five day maneuver, you can land on one of the outlying air fields, establish yourselves, take care of yourselves, and have time left to carry out a specific assigned mission. We have every reason to believe it can be done, but it hasn't been proved militarily."

During the exercise which I observed—the second of the four successive exercises constituting Exercise Yukon—the lowest recorded temperature was —15 degrees F. Consequently, no conclusions can be drawn from this particular exercise as to the ability of soldiers to operate tactically under conditions of extreme cold. However, the planning and pre-Arctic training which preceded the exercise, as well as the actual conduct of the exercise, even though under weather conditions that were not extreme, provided several interesting aspects.

In May 1947, the 2d Infantry Division received a directive to form four augmented rifle companies of 250 officers and enlisted men each, to participate in Exercise Yukon. Each company was to consist of an infantry rifle company of 6 officers and 150 enlisted men, plus such additional elements that all combat units of an infantry division would be represented by at least a platoon in one of the four companies. Each company was to be commanded by a field officer. It would have been desirable and, as a matter of fact, it was originally planned, to send a larger force to Alaska, but limitations in air

transport and in base camp facilities made it necessary to limit the number of troops in any one exercise to a reinforced company.

Organization

The four reinforced companies were called Ucon Companies and were organized as indicated in the chart on page 14.

Notice how every type of combat unit in the division was represented in one of the four companies.

The pre-Arctic training of the Ucon Companies was divided into three principal phases: An airtransportability phase; a pre-Arctic schools phase; and an acclimatization phase.

Airtransportability Training

The airtransportability phase, which lasted about two months, was conducted as follows:

A training group, consisting of three officers and twelve enlisted men was made available to the 2d Infantry Division from the 82d Airborne Division. Their first task, on arrival at Fort Lewis, the station of the 2d Infantry Division, was to supervise the building of a mock-up area in the 2d Division training area consisting of a number of mock-ups of the C-82 airplane. Obviously such a small group of specialists was inadequate to train the division as a whole in airtransportability subjects, so it was decided to train selected officers and noncommissioned officers as division airtransportability instructors.

The training of those instructors consisted of the following subjects: History of air movement; basic loading theory to include knots and lashings, computation of weights and balances, and actual demonstrations of loading; air movement doctrines, tactics, theory, and techniques; and classroom air movement exercises.

Following the instructors' indoctrination course, all troops assigned to the maneuver force, plus sufficient troops to insure adequate replacements, were put through the same course of instruction. Basic subjects were taught in the classroom, followed by practice in such things as loading and lashing in the mock-up area.

Upon completion of this training, a series of orientation flights was scheduled. For many of the men, this was their first flight in an airplane. During this period of training the following points were stressed:

The conduct of personnel during flight and the action to be taken during any emergency which might arise.

The organization for loading.

The theory that each planeload of men must be able to efficiently load and unload the equipment carried in their plane, was stressed.

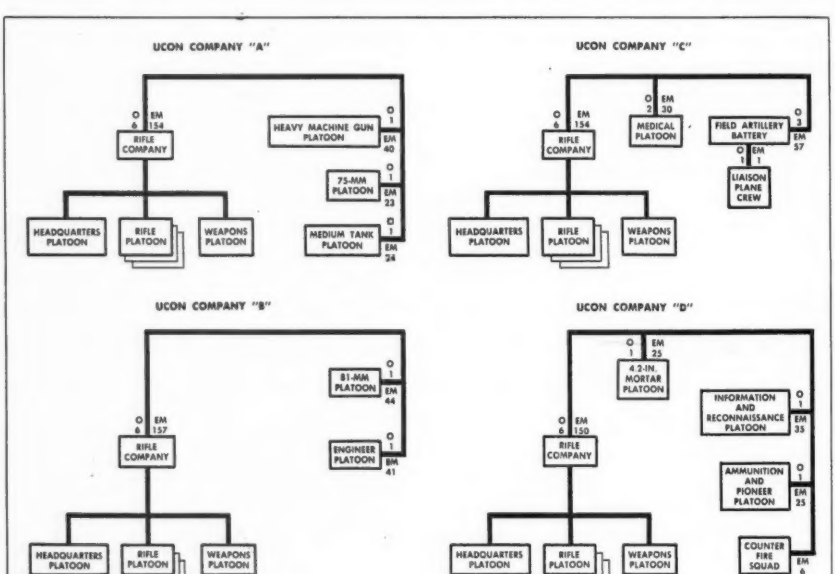
In Exercise Yukon in Alaska, American troops tested their training for Arctic operations, and showed that men can be transported and dropped by air, be self-sufficient, and still fight and carry out a mission

The loading and lashing of the actual equipment to be taken to Alaska.

The flexibility of plans on the part of loading officers to insure quick adaptability of loading to the actual conditions at the time of emplaning. It was stressed that in the event the planned number of planes was not available, each commander must know exactly what equipment he intended to leave behind.

As the final step in the airtransportability phase of training, a tactical exercise involving the defense of an air field was conducted. It was assumed that an airborne enemy force had captured Aberdeen, Washington, some 100 miles south of Gray Field, Washington, Gray Field being a small air field at Fort Lewis adjacent to the 2d Division training area. Each Ucon Company was assumed to be at the time stationed in Idaho. Each Ucon Company, in turn, was moved administratively from Ft. Lewis to McChord Field, Washington, loaded into C-82 aircraft, airlifted, and landed again at McChord Field to simulate

arrival from Idaho. The Ucon Company then deployed and moved to defend Gray Field. A dummy air drop was made to simulate the landing of enemy airborne troops at Gray Field, while other troops of the 2d Division, already on the ground, went into action to simulate the airdropped personnel and thus add realism to the problem. This maneuver was conducted under strict umpire surveillance to determine the efficiency of the Ucon Companies in both airtransportability training and tactical operation.



Pre-Arctic Schools

Upon completion of the airtransportability phase of training, the pre-Arctic schools phase was begun. Subjects taught during this phase were:

Repair of skis and snowshoes; winterization of ordnance, signal and engineer equipment; and care and use of Arctic clothing and equipment.

Acclimatization Phase

The final pre-Arctic training phase was the acclimatization phase conducted at Ranger Creek Camp on the slopes of Mt. Ranier, Washington. During this phase, each company was taken to the training site, 5,000 feet high with conditions of snow, wind and cold somewhat approximating those to be found in Alaska. The purpose of this phase of training was to concentrate on those subjects necessary for survival in the Arctic and to accustom the men to living and fighting under severe weather conditions.

The subjects covered during this phase were:

Conditioning marches; preparing rough beds; pitching Arctic tents and Jamesway Huts; use, care, and maintenance of Arctic clothing; Arctic cooking; snow melting; cargo sleds, toboggans, and ruck sacks; selection of camp sites; fire building and fire prevention; safety precautions; frost bite; oversnow and air supply; construction of Arctic shelters; ski instruction; field expedients; buddy system; squad, platoon and company tactical exercises.

Men were formed into five-man tent teams and taught to live and work as a team. Although the weather is wet-cold

in the Mt. Ranier area, as compared with the dry-cold of central Alaska, and although the average temperature is less extreme in the Mt. Ranier area than in most parts of Alaska, nevertheless the training conducted there was very worthwhile. The ability of the men of the 2d Division to take care of themselves when they arrived in Alaska proved the value of the three week training period conducted at Ranger Creek Camp.

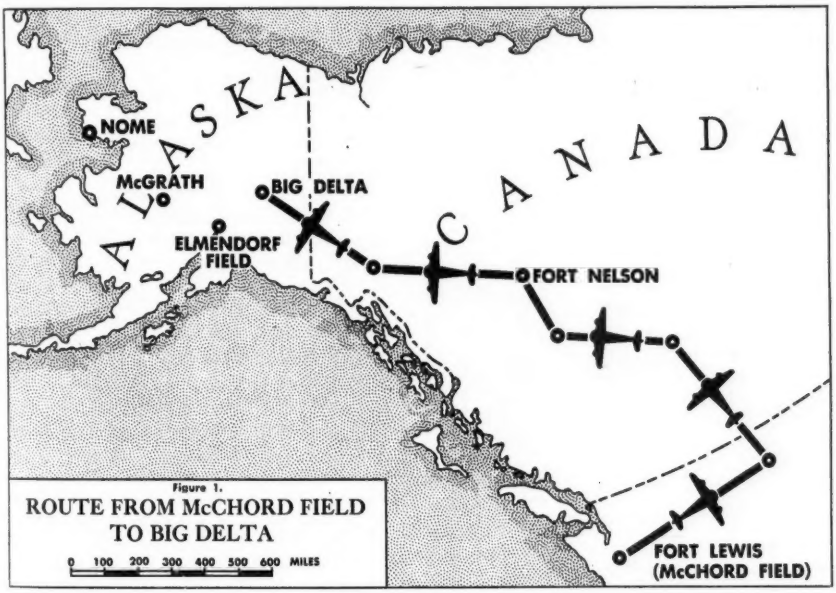


Figure 1.
ROUTE FROM McCHORD FIELD TO BIG DELTA

The Operation

On 30 November 1947, Ucon Company B, the second of the four Ucon Companies to go to Alaska, loaded into thirty C-82 airplanes at McChord Field, Washington, and took off for Alaska. The trip was made via Great Falls, Montana, and the inland route (Figure 1), this route being considered safer for two engined airplanes than the coastal route. Two stops were made en route, one at Great Falls, Montana, and one at Fort Nelson, British Columbia. The country grew progressively more rugged and desolate as the flight neared Alaska, with no roads visible except an occasional glimpse of the Alcan Highway. Extremely rugged mountains and boggy looking valleys were all that one could see. In short, it was a sight to make a doughboy yearn for the early advent of push-button warfare.

Ucon Company B arrived at Big Delta, Alaska, on 5 December. Special equipment, such as tents, stoves, toboggans, skis and snowshoes were drawn, and a three day shake-down exercise was conducted in the vicinity of Big Delta.

On 6 December, the following General and Special Situations were issued:

General Situation

Late in November, Commander in Chief, Alaska, received the following message from the Joint Chiefs of Staff:

Current intelligence indicates that an attack on the United States is imminent. Enemy is capable of delivering limited air and airborne attacks on air fields in your theater. Second Infantry Division and "X" Troop Carrier Squadron are immediately available to you. You will be advised as to further availability of forces to implement your plans. Acknowledge.

CINCAL ordered that a reinforced rifle company, 2d Infantry Division, be air-transported to Big Delta, Alaska, immediately for an urgent and specific task to be assigned upon arrival in the theater.

FIGURE 2.

Special Situation

Ucon Company B, reinforced, from the 2d Infantry Division, has arrived at Big Delta, Alaska. The 7th Troop Carrier Squadron, consisting of fifteen (15) C-82 aircraft, has arrived at Elmendorf Field for the purpose of transporting Ucon Company B any place that it may be ordered.

Both units have been placed under the Commanding General, Alaskan Air Command, who has delegated operational control to the Commanding General, Yukon Sector. The Commanding General, Yukon Sector, has ordered Ucon Company B and the 7th Troop Carrier Squadron to be ready to move to any point in Alaska, combat loaded, upon twenty-four (24) hours notice.

* * * * *

On 11 December 47, the Commanding Officer, Ucon Company B, received a message from the Commanding General, Yukon Sector, extracts of which were as follows:

Aggressor forces have captured U.S. Airdrome at Nome, Alaska. Aggressor reconnaissance aviation has been active over McGrath. Ucon Company B will move by air to McGrath, 12 December 47. Seventh Troop Carrier Squadron will provide fifteen (15) C-82 Type Aircraft for the move. Fifty-seventh Fighter Squadron will provide air cover, escort, and interception for movement. Commanding Officer Big Delta Air Base will provide protection during loading phase. End.

Plans were made and orders issued for the loading phase, the move, and the defense of the air field at McGrath. Ucon Company B departed for Big Delta on 12

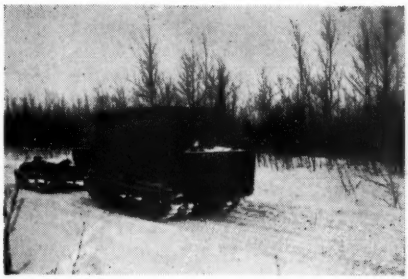
December 47 and proceeded to McGrath. Aggressor fighters were met, engaged, and driven off by the Fifty-seventh Fighter Squadron during the flight.

Air Field Defense

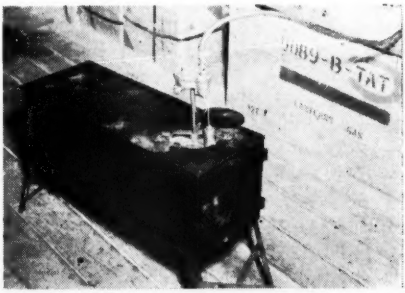
The plan for the defense of the McGrath air field called for the dispositions as shown in Figure 2. The 1st and 3d platoons and reinforcing weapons were to be bivouacked in woods adjoining the main airstrip and the 2d platoon was to protect the radio station some 2,500 yards to the east of the airstrip. Within a few minutes after arrival at McGrath, it was evident that the principal difficulty in defending the field would be that of movement through the deep snow. The snow depth was officially recorded at twenty-two inches, although it was much deeper in places. Despite the use of snowshoes, skis and toboggans, it proved to be a man-sized job merely to transport equipment from the aircraft on the runway to the bivouac areas a few hundred yards distant. It was evident that the movement of troops from their bivouac area to any threatened sector would be a slow and laborious process. On the other hand, the attacker's problems of assembly after dropping, of recovery of equipment, and of movement to attack the field would pose even greater problems than those of the defender—*unless* he chose to land directly on the airstrip after an intensive air attack, taking his losses from the defenders' fire, and hoping to smother the defending troops with the weight of his attack.

It was found that the vehicle M-29C (Weasel) is a very effective means of beating trails through the snow. In any perimeter defense in deep snow, such as that employed at McGrath, the immediate employment of Weasels to establish a system of well-beaten trails around the perimeter and between strong points on the perimeter and the headquarters in the center will give the defender a tremen-

Movement through snow was one of the main difficulties in Exercise Yukon. Above, toboggan sled with 3-man harness.



Above, the M-29C (Weasel) was effective in making trails through snow. Below, a type of stove used in Exercise Yukon.



dous advantage in mobility over the attacker.

Although weather conditions were not severe enough to provide any real test of the ability of soldiers to withstand extreme cold, members of Ucon Company B appeared to have learned reasonably well how to live and take care of themselves in the field. Cases of frostbite due to carelessness were rare.

The mere problem of living in the Arctic without becoming a casualty is one that will require careful and complete training and strict discipline in any large scale Arctic operations of the future. The difficulties involved during World War II in educating soldiers to take proper precautions to prevent trenchfoot were minor compared to the problems involved in teaching soldiers to live without becoming a casualty in the Arctic. Little things, such as failure to shed an outer garment when working to prevent overheating, or failure to brush the snow from felt boots when entering a warm room or tent, may mean the difference between a fighting soldier and a litter case.

It was true that a large percentage of each twenty-four hours was spent on the tasks incident to living, leaving less time than would be desirable for fighting. To a certain extent this is unavoidable in cold weather, due to retarded physical reactions and due to the fact that bulky clothes and heavy mittens tend to hamper the performance of even the simplest tasks. Individual cooking was probably the greatest time consumer of all. At first glance, it would appear that, with limited air transportation, field kitchens would be out of the question on an Arctic operation. However, when one considers the man hours saved by the operation of unit kitchens, to say nothing of the improvement in soldier morale and health, the slight additional weight and bulk of field kitchens could be considered equivalent to a rather substantial increase in fighting manpower.

Throughout the six day exercise at McGrath, a small Aggressor Force, led by two very capable officers, formerly members of the Alaska Scouts, operated against Ucon Company B. Exercises on the 12th, 13th and 14th of December consisted of the defense of the air field by Company B. On 14 December, after an intensive air attack by two squadrons of Aggressor aircraft, a dummy airdrop was made in the vicinity of the field, followed by efforts of the Aggressor Force on the ground to penetrate the defenses of the field. The field was successfully defended, although results of the air attack were not taken strictly into account. On the 15th and 16th of December, Company B moved to a simulated drop zone east of McGrath and attacked the field against the defending Aggressor Force and under strict umpire control. Throughout these exercises, small Aggressor Forces were able to infiltrate a few men through Company B's lines almost at will due to superior training in scouting, patrolling and snow mobility. It became evident throughout these exercises—to this observer at least—that although a well-trained enemy airborne force, protected by air superiority, could land some distance from the air field, assemble and move towards the field while his own airforce was working over the defenders, the complete lack of roads and the deep snow would make this a slow and difficult task. His best chance of success, it appeared, would be to drop directly on the field after an intensive and stunning air attack. An air attack against troops above ground and unable to dig in, should be quite effective.

On 18 December, Ucon Company B was picked up by the 7th Troop Carrier Squadron and returned to Big Delta. In spite of thorough training of both Company B and 7th Troop Carrier Squadron in air-transportability, many small misunderstandings arose between the two, both on the outgoing and return flights. These

misunderstandings were relatively minor in nature and were due principally to lack of adequate positive liaison between Company B and 7th Troop Carrier Squadron. It is considered essential that in any joint operation of this nature, full-time liaison officers be exchanged between units of the two services.

Conclusions

Acknowledging that the saying "a little knowledge is a dangerous thing" applies particularly well to the highly variable Arctic, it would be unwise to draw any far-reaching conclusions regarding Arctic warfare, based only upon observation of this exercise.

However, based upon the limited observations enumerated above, the following conclusions appear to be in order:

1. That the pre-Arctic acclimatization training conducted in the Mt. Ranier area prior to Exercise Yukon was both necessary and highly effective in training members of Ucon Company B in methods of taking care of themselves in the Arctic.

2. That in any Arctic operations extending over long periods of time and conducted under actual war conditions, a higher than ordinary degree of leadership and discipline will be necessary in order to prevent undue weather casualties.

3. That the program of airtransportability training conducted prior to Exercise Yukon was both necessary and highly effective in training members of Company B for the airtransported phase of this exercise.

4. That in operations of this type provision must be made for the full time exchange of liaison officers between small ground and air force units, if air movements are to be made with maximum efficiency.

5. That although the number of usable man hours available to any given unit will always be less in the Arctic than in

Equipment tested in Exercise Yukon included different types of shelters. Above, a Jamesway Hut under construction.

Above, front view of a Jamesway Hut. Below, a lightweight pyramidal tent used in the Alaskan exercise.

more moderate climates, means should be found to increase the number of man hours available in Arctic operations.

6. That the present policy of giving top priority to the air defense rather than the ground defense of Alaska is sound. If the defense of air fields in Alaska by ground troops ever becomes a reality, it will be because the enemy has gained at least temporary air superiority. In that event the only way in which ground troops would be able to disrupt or delay the capture of these fields by enemy airborne forces would be by having on or near these fields sufficient antiaircraft guns, bombproof underground shelters, pillboxes, and at least a few tanks. Time will be short and air transport facilities will be limited when the necessity for the defense of the fields becomes imminent. It would appear desirable to prepare these fields for adequate ground defense at an early date.

Without adequate defensive ground forces in Alaska—and we do not have them there today—an enemy might by surprise attack seize bases there from which it would be extremely difficult to dislodge him. We know from bitter experience in the Pacific how difficult—and how expensive in lives and in time and matériel—it is to dislodge armed troops established in a remote location. We need strong Army forces to protect against this—either on the spot or available here at home for prompt movement to threatened strategic areas to the northeast and northwest of us.

General J. Lawton Collins

We must train in peace as we would train in the event of war. Our plans for mobilization training must be for an expansion, not a revolution, of our peacetime training. However, because men do not live and work in peace as they do in war the peacetime training tempo will be slower. But the hours devoted to any one subject, the standards to be achieved and the methods used in instruction—all must be the same in peace as they would be in the event of war. The difference lies in the number of hours that can be devoted to training during a week. Without lowering our standards we must seek constantly to improve our training methods in order to shorten training time.

The immediate aim is to give all soldiers sound basic training. Each subject, reduced to the elements necessary for combat, must be mastered; therefore, time must be allotted only for essential subjects. Polish and versatility are developed later as a result of time, experience and constant association. During peacetime, continuous and progressive training must provide for the heavy cadre demands which would be made if we were called to mobilize.

All training must stress that every soldier regardless of assignment has as his primary duty the obligation to fight. Individual training has two purposes: first, to teach men to fight; and second, to teach men to instruct others how to fight. Unit training has three purposes: first, to teach individuals how teamwork produces an effective combat unit; second, to develop cadres on which fighting units can be built; third, to produce smooth working units which are ready for combat in the minimum time.

General Jacob L. Devers

Military Justice Procedures

Major General Thomas H. Green,
The Judge Advocate General, *USA*

THE Articles of War, the military code of the Army, have been in effect since the beginning of the constitutional government of the United States. The earliest armies of the colonies in America, in their revolts against the British crown, utilized the military code then in effect in the British Army and, following adoption of the Constitution, the Congress adopted the code in all its salient features.*

Substantive and procedural enactments specially applied to armed forces have been in use by organized armies at least as far back as Roman times. The codes have been found vital to the maintenance of discipline and good order within forces called upon to wage war; and the successes of armies have been measured to a great extent by their discipline. Upon the adoption of the Constitution, the practical necessity of a system of criminal and disciplinary justice for the Army, operated independently of the judicial systems of the Federal and state governments, was expressly recognized. Congress was granted the power to make rules for the regulation of the land and naval forces and cases arising in those forces were excepted from the guarantees of the Fifth Amendment with respect to indictment or presentment by grand jury. Enactment by the Congress of Articles of War followed.

Special Need for Military Courts

Were the procedures of military justice identical with those of the civil courts, courts-martial might well be abolished for there would be little advantage in maintaining two identical systems for the trial of accused persons. The procedures of military justice differ from those of the civil courts in that the former are essentially summary in their nature. There are in the composition of courts-martial points of resemblance to the petit jury but the common law jury is not utilized in military procedure. The steps leading to and involved in trials by courts-martial have moreover been simplified to the end of insuring prompt and efficient disposition of charges. In short, systems of military justice are historically designed as effective instruments of command, available to officers tactically responsible for the

* Since the writing of this article, the Secretary of Defense has appointed an *ad hoc* committee to prepare, for the consideration of Congress, a modern and uniform code of military justice for the Armed Services, which would supersede the Articles of War and the Articles for the Government of the Navy.—The Editor.

Marked changes in administration of military justice were effected by the Selective Service Act of 1948, including modification of Articles of War and establishment of a separate Judge Advocate General's Corps

waging of battles and the winning of wars.

But since effective discipline depends as much upon confidence of fair dealing as upon summary punishment, the system of military justice in the Army has also been designed to insure unfailing and substantial justice in the determination of guilt and the imposition of punishment. The stern commander succeeds if he is always just.

The development and utilization by the United States of large armies based upon compulsory universal service, in lieu of professional soldiery, has brought under the stringencies of military control great segments of the civilian population unschooled in military ways. These citizen soldiers have brought with them their American conceptions of justice under the law. Adjustment of procedures of courts-martial, if the concepts of discipline with justice were to be preserved and accepted, have been inevitable.

Prior to World War I, the processes of courts-martial stopped in most cases at the level of the officers who appointed the courts. That is to say, after a courts-martial had found an accused person guilty and had sentenced him, the appointing authority had the unlimited power to approve or disapprove the sentence and direct its execution forthwith. There being no appeal, there was no adequate judicial control of trial procedure to insure compliance with the basic rules of proof and fair hearing imbedded in the criminal law. The Army, recognizing the need, instituted, through the famous General Order No. 7 of January 1918, administrative requirements for judicial review prior to the execution of severe sentences such as sentences to death, dismissal, or dishonorable discharge.

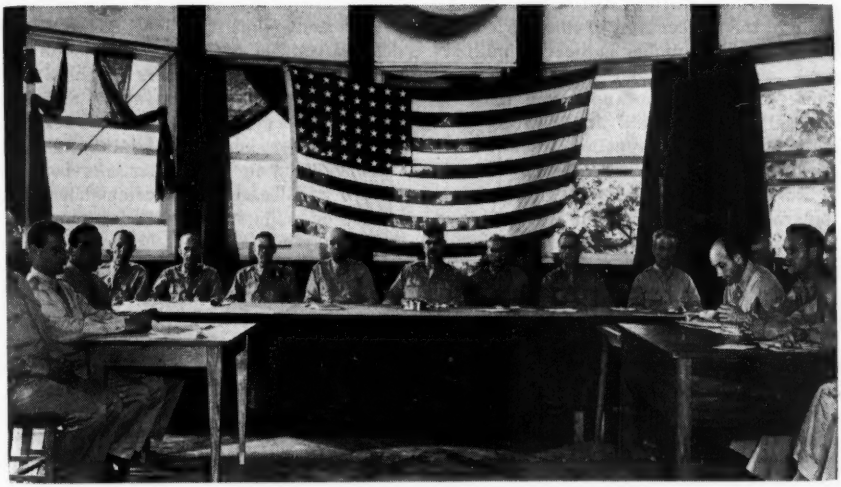
Revision of 1920

In 1920 the Congress revised the Articles of War in important procedural aspects, the amendments being patterned largely on wartime forms of World War I. In addition to establishing a statutory system of judicial appellate review, the revision laid down definitive rules for the preferring and verification of charges; forbade the reference of charges to major courts-martial until after a thorough and impartial investigation had been completed and until after the charges had been considered by a legal officer, a judge advocate on the staff of the appointing authority; and required the appointment of defense counsel prior to trial. The revision also required the appointment of a law member of each general court-martial, an officer of legal training if available, with power to rule upon the admissibility of evidence and other interlocutory matters. Appointing authorities were required to receive the advice of their staff judge advocates before approving sentences.

The revision forbade the execution, generally, of sentences to death, dismissal, dishonorable discharge, or confinement in a penitentiary until the records of trial had been first passed upon in appellate judicial review by The Judge Advocate General and a Board of Review in his office. This Board of Review, composed of legal officers of the Judge Advocate General's Department, acting with The Judge Advocate General, was empowered to vacate findings of guilty and sentences and was vested with the appellate powers generally found in civil criminal appellate courts of the United States. The Board of Review and The Judge Advocate General were required to advise the Secretary of War concerning records of trial involving sentences to death or dismissal which sentences require confirming action by the President prior to execution.

The revision provided for rehearings upon disapproval of sentences but forbade reconsideration of findings of not guilty, as well as proceedings to increase sentences.

With but minor amendments the military code of 1920 governed the armies of the



Military justice in operation during World War II. Above, a general court-martial meeting at Anfa, Casablanca, in French Morocco, August, 1943. Below, a court-martial of the 37th Division, in session in a hut on Bougainville, Solomon Islands, December, 1943.—US Army Signal Corps photos.

United States during World War II. Although the percentage of men tried (as related to the number subject to military law) was lower than could have been expected, many thousands were tried by general courts-martial for military and civil type offenses. Appellate reviews were conducted in overseas theaters by Boards of Review and Assistants Judge Advocate General in a series of five branch offices of The Judge Advocate General established in the theaters.

In June 1945, following VE-day, the Secretary of War appointed an Advisory Board on Clemency under the chairmanship of a judge of the United States Circuit Court of Appeals (later replaced by a retired Justice of the Supreme Court) which, with the assistance of special clemency boards under its supervision, reviewed from the standpoint of clemency the cases of all general prisoners, that is, military prisoners under sentence to dismissal or dishonorable discharge, who were then still in confinement.

Advisory Committee

In March 1946, following studies within the War Department and elsewhere of the administration of military justice during the war, the Secretary of War appointed a War Department Advisory Committee on Military Justice composed of eminent members of the bench and bar nominated by the president of the American Bar Association, requesting further study. This Committee, after extended inquiries and headings, submitted its report in November 1946. Its recommendations were of far reaching character in some respects.

Among other things the Committee recommended that qualified enlisted men be made eligible to serve as members of general and special courts-martial and be appointed as members to the extent deemed desirable by the appointing authority; that greater emphasis be placed upon the thorough and impartial investigation of charges required by Article of War 70; that there be established a jurisdictional requirement that the law member and defense counsel of general courts-martial be trained lawyers, officers of the Judge Advocate General's Department; and that the law members be required to be actually present throughout the trials and that their rulings on legal questions be conclusive in all cases. It recommended that officers be made subject to trial by special courts-martial, and that Article of War 104 be amended to include all classes of military persons and to authorize increased punishment of officers below the grade of brigadier general.

The Committee recommended that the appointment of courts-martial be made a duty of The Judge Advocate General, with the trial judge advocate a representative of the responsible military commander, the commander to exercise the power of mitigation, suspension and vacation of sentences but not otherwise to act upon the records of trial.

It was recommended that the final review of all general court-martial cases be placed in the Office of the Judge Advocate General with authority to weigh evidence and to mitigate or vacate sentences and order new trials. In this connection it was recommended that Article of War 50½, adopted in the revision of 1920 as the basic law for appellate review, be rewritten for purposes of clarity and certainty.

The Committee recommended that all requirements with respect to general courts-martial be made applicable so far as practicable to special courts-martial. It recommended that an additional form of discharge such as the "bad conduct" discharge be provided as punishment.

New Legislation

Following consideration of the report of the Advisory Committee on Military Justice and a report on the judicial system of the Army by the Committee on Military Affairs of the House of Representatives

of the 79th Congress, the War Department presented to the Congress a program of changes in the administration of military justice. Identical bills amending the Articles of War were introduced in the Senate and House of Representatives (S. 903; H.R. 2575, 80th Cong.). Many of the recommendations of the Advisory Committee were incorporated in the bills; others were not incorporated. The Legal Subcommittee of the Committee on Armed Services of the House of Representatives (80th Cong.) held extended public hearings on H.R. 2575, which was passed by the House on 15 January 1948. By amendment to the Selective Service Act of 1948 as Title II of that act, the provisions of H.R. 2575 were passed by both Houses on 19 June 1948 and approved by the President on 24 June 1948. The revised Articles of War become effective on 1 February 1949.

Articles of War Amended

Among the amendments embodied in the revised articles is one making warrant officers and enlisted persons competent to serve as members of general and special courts-martial. In respect to trials of enlisted persons, the accused are given the right to demand inclusion in the membership of the courts enlisted persons to the number of at least one-third of the total membership. Thus, for the first time in the history of American courts-martial, enlisted persons are made eligible for participation in the judicial duties involved.

An amendment of Article of War 8 requires the appointment as a law member of each general court-martial of an officer of the Judge Advocate General's Department or a member of the bar of a Federal court or of the highest court of a state certified by The Judge Advocate General to be qualified for such detail; and requires the actual participation of the law member in each trial.

Under the new Article of War 31 the law member's ruling on all interlocutory questions other than on a motion for a finding of not guilty or the question of accused's sanity shall be final.

An amendment of Article of War 11 alters the present requirements as to the appointment of trial judge advocates and defense counsel of general courts-martial to provide that each shall be a member of the Judge Advocate General's Department or a qualified lawyer, if available. This requirement is not mandatory and recognizes the possibility that qualified lawyers will not always be available for duty as trial judge advocates and defense counsel. The privilege of an accused person to have counsel of his own choice in lieu of the detailed counsel is continued.

Amendments of Articles of War 12, 36, 47, and 108 introduce into the court-martial system of the Army the punishment of the "bad conduct" discharge. Such a discharge, of somewhat less severity than the traditional dishonorable discharge, is to be adjudged, at their option, by general and special courts-martial.

An amendment of Article of War 16 in effect requires a change in the present Manual for Courts-Martial to permit trials of officers by special courts-martial. Amendment of this Article also makes ineligible as a member of a court-martial an enlisted person assigned to the same company to which the accused is assigned.

Amendment of Article of War 24 introduces a specific prohibition against the use of coercion or unlawful influence to obtain incriminating statements, and an express prohibition (now a rule of evidence prescribed by the Manual for Courts-Martial) against the reception in evidence by courts-martial of any statement, admission or confession so obtained.

An amendment of Article of War 25 permits the use of depositions for the prosecution in any case in which the death penalty is authorized but is not mandatory whenever the appointing au-

thority shall have directed that the case be tried as not capital. Provision is also made for the taking of depositions at any time after charges have been signed. Under the present code there is no authority to take depositions until after charges have been referred for trial.

An amendment of Article of War 39 removes the bar of the statute of limitations with respect to absence without leave committed in time of war. Another amendment of this article authorizes the Secretary of the Department of the Army in time of war to extend the period of limitation for the duration of the war plus six months in the case of an offense the trial of which he shall certify to be detrimental to the prosecution of the war or inimical to the Nation's security.

By amendment of Article of War 44 officers tried by courts-martial in time of war may be reduced to the grade of private. This punishment may be utilized only in those cases in which a sentence to dismissal might lawfully be adjudged.

By amendment of Article of War 46 the basic requirements of Article of War 70 of the code of 1920 relating to the investigation of charges have been placed in Article of War 46. The requirements of the 1920 code are continued without substantial change except that provision is made for participation in investigations by counsel for accused persons when the accused requests such participation.

By amendment of Article of War 46 there are covered into that Article the provisions of Article of War 70 of the present code relating to pre-trial advice upon general court-martial charges by staff judge advocates, retaining the requirements of Article of War 46 of the present code relating to the approval of sentences and review of and advice upon records of trial by staff judge advocates. It is provided that a sentence involving a bad-conduct discharge adjudged by special court-martial shall not be carried into execution until also approved by the officer authorized to appoint a general court-martial.

Under Article of War 48 of the code of 1920 sentences involving death, a general officer, or dismissal of any officer must be confirmed by the President before execution. The new article requires confirmation by the President only in the case of a sentence to death or a sentence involving a general officer. Confirmation of sentences to dismissal are to be effected by a Judicial Council to be established in the Office of the Judge Advocate General acting in concert with The Judge Advocate General, or by the Secretary of the Army in certain cases of nonconcurrence. This confirming power, which involves the power to commute, will also be extended under certain conditions to other general court-martial sentences.

An amendment of Article of War 50 places in that Article the basic rules of judicial appellate review, as distinguished from confirmation, now contained in Article of War 50½. The requirement for appellate review by a Board of Review is extended to all cases involving dishonorable or bad conduct discharge or confinement in a penitentiary. All sentences adjudged by general courts-martial and all bad conduct discharge cases are made subject to confirming and commuting action by the Judicial Council if deemed by The Judge Advocate General to be necessary. The appellate agencies in the office of the Judge Advocate General are empowered to weigh evidence, a power which under the code of 1920 may be used only in cases requiring confirmation by the President. Courts-martial judgments are expressly declared to be final and conclusive.

An amendment of Article of War 51 extends to The Judge Advocate General under the direction of the Secretary of the Army, the power, under prescribed conditions, to mitigate, remit, or suspend sentences.

By amendments of Articles of War 52

and 53 the present power to grant rehearings is continued but is extended to authorize The Judge Advocate General, as well as appointing and confirming authorities, to direct such rehearings. By amendment of Article of War 53 The Judge Advocate General is authorized, under prescribed conditions, to grant new trials after sentences become final, upon application of the accused.

An amendment of Article of War 88 expressly prohibits any appointing authority or other commanding officer to censure, reprimand, or admonish any court-martial or a member thereof in respect to the findings or sentence adjudged by the court or in respect otherwise to its judicial responsibility. Any attempt to coerce or unlawfully influence a court-martial is expressly prohibited.

An amendment of Article of War 92 removes the present mandatory requirements of punishment of death or life imprisonment for rape and authorizes the punishment of death or such other punishment as may be directed by the court-martial in its discretion. Murder committed without premeditation will be punishable as a court-martial may direct.

An amendment of Article of War 104 extends the power of disciplinary punishment to all warrant officers and officers below the grade of brigadier general and authorizes punishment in such cases of forfeiture of not more than one-half pay per month for three months.

Neither the program presented by the War Department nor the Amendments as enacted by Congress adopted the proposal of the Advisory Committee on Military Justice that the appointment of courts-martial be made a duty of The Judge Advocate General. Title II of the Selective Service Act of 1948 did, however, incorporate amendments of the National Defense Act which establishes a separate Judge Advocate General's Corps of specified grades and strength (also recommended by the Advisory Committee). The provision gives autonomy to the Judge Advocate General's Corps to the extent that the officers assigned to it cannot, except upon their own application, be transferred to other branches of the Army.

Sept 1948.

Our free democratic traditions of equal opportunity, civil rights and the freedom of the individual to assert himself against institutions, is too strongly implanted in our young men to warrant anything but a democratic Army. And while greater control is required in the Armed Forces than in other fields of employment, I believe this authority can be exercised freely, intelligently, and judiciously without impairing a man's basic human rights.

General Omar N. Bradley

You can have all the material in the world, but without morale it is largely ineffective.

General of the Army George C. Marshall

The Industrial College of the Armed Forces

Lieutenant Colonel John G. Ondrick, *Infantry*
Instructor, Command and General Staff College

IN Washington, D.C., there stands a living monument to the farseeing, progressive thinkers, civil and military, who in the past thirty years have unveiled yet another truth about modern war. This truth, this penetrating basic realization, is that victory in modern war depends as much upon the productive capacity of a nation's economy as it depends upon the skill and valor of her fighting forces. The realistic and visible evidence of such thinking is found in the existence of a graduate school in the highest level of service schools, the Industrial College of the Armed Forces.

Mission

The mission of the college is:

To prepare officers of the Armed Forces and selected civilians for important command, staff, and planning assignments in the National Military Establishment and other governmental agencies.

To conduct a course of study in all economic factors of national strategy and the interrelation of these economic factors to the political, military, and psychological factors.

To conduct a course of study in all aspects of joint logistic planning and the interrelation of this planning to joint strategic planning and to the economy of the nation.

To promote understanding and study of all agencies and of economic and joint logistics factors which are important to the Nation and to the Armed Forces.

No other single major power has a similar institution in being. Even the once mighty *Wehrmacht* did not possess such a school. The uniqueness of this college warrants a brief sketch of its founding and growth before discussing its present curriculum.

Prior to World War I not even an effort had been made by the services to train officers for service representation in the broad and complex fields existing in the economic mobilization of our national economy during an emergency. During World War I there were no civilians, individually or collectively, who could blue print efficiently or even expeditiously our course of action in mobilization. Improvisation was the order of the day. It is a historical fact that the great, productive United States was, because of the time required to convert from peace to war, largely dependent upon her allies for military supplies throughout the war period. Unfortunately, the great American public merely talked about this condition and neglected, after World War I, to analyze our participation in that war for lessons to be applied in the event of a future emergency. However, there were thinking individuals in the Congress, in the services, and in civilian life who began to perceive this new truth about modern warfare.

The first evident result of lessons learned by analyzing our participation in World War I was the amendment of the National Defense Act. This amendment on 4 June 1920 gave to the Office of the Assistant Secretary of War the authority to provide for industrial mobilization planning in the event of another war. Specifically, the occupant of that office was responsible for these two tasks:

a. Supervision of the procurement of all military supplies by the War Department (now the Department of the Army).

b. Making adequate plans for the mobilization of material and of industrial organizations.

However, to implement such a directive there had to be personnel especially trained and experienced in procurement and industrial mobilization. To satisfy this requirement, the Assistant Secretary of War (later designated as the Under Secretary of War) formed a section in his office known as the Planning Branch. This section was designed for the training of officers in war procurement and war production. Initially assigned to this section were some of the very few officers who had World War I experience in our industrial mobilization. These officers were mainly from the technical services and their research was, in great part, a study of the records of the War Industries Board and those of the Council of National Defense, agencies which had been created in World War I. Trained in this manner, the officers assigned to the Planning Branch went on to planning work.

Course of Instruction

This unsatisfactory training in the Planning Branch was soon recognized by the then Assistant Secretary of War, Mr. Dwight F. Davis. It may be said that by his boldness, initiative, and farsightedness in correcting this unsatisfactory condition the foundations of the present Industrial College of the Armed Forces were laid. In a memorandum to the then Secretary of War, he suggested that a specific and special course of instruction be instituted in his office—

"In order to develop within a reasonable time a suitable number of Regular officers trained for duty in the Office of the Assistant Secretary in the beginning of an emergency."

Further amplifying his request, Mr. Davis suggested that the course of instruction be six months, that selected officers be given this instruction, that upon completion of their studies the officers would revert to their respective branches for duty, and that the courses be recurrent so as to provide for the Army a constantly increasing number of officers familiar with the complexities of procurement and industrial mobilization. The seed thus sown sprang to life, for on 25 February 1924, War Department General Order Number 7 was published which said in part that:

The Industrial College of the Armed Forces is a unique graduate school on the highest level in the services, where selected officers of the Army, Navy and Air Force study the problems of economic mobilization

"A college, to be known as The Army Industrial College is hereby established for the purpose of training Army Officers in the useful knowledge pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of matériel and industrial organizations essential to wartime needs."

The Assistant Secretary of War was charged with the supervision and control of the college and thus was the present Industrial College of the Armed Forces created.

Subsequent Development

The first scheduled course of instruction was completed in June 1924. The following year naval officers joined the student body and ever since that year the Navy has been sending selected officers to the College. In 1926 the course of instruction was lengthened to one year with a corresponding expansion in the scope of College work. Yearly, in increasing numbers, outstanding personalities in government, finance, commerce, industry, science, and education began to appear as lecturers and advisers. Until 1940 there was a steady and progressive growth within the College. The student body was increased and qualifications for selection and admission as students were raised considerably. The faculty was augmented. The curriculum was broadened—it included advanced study and research in the national and international fields of industrial mobilization as they affect the supporting economics. In August 1940 the College suspended normal operations and substituted a course lasting four and one half months. Before the year was over, the course was shortened to three months and designed to graduate four classes per year. Foresight again played a major role in instituting such stringent measures for it was apparent that there would be an alarming shortage of officers familiar with problems of mobilization if the United States became an active participant in World War II. Even such bold and well conceived operations were short lived for in December 1941, with the nation at war, the College was forced to suspend operations.

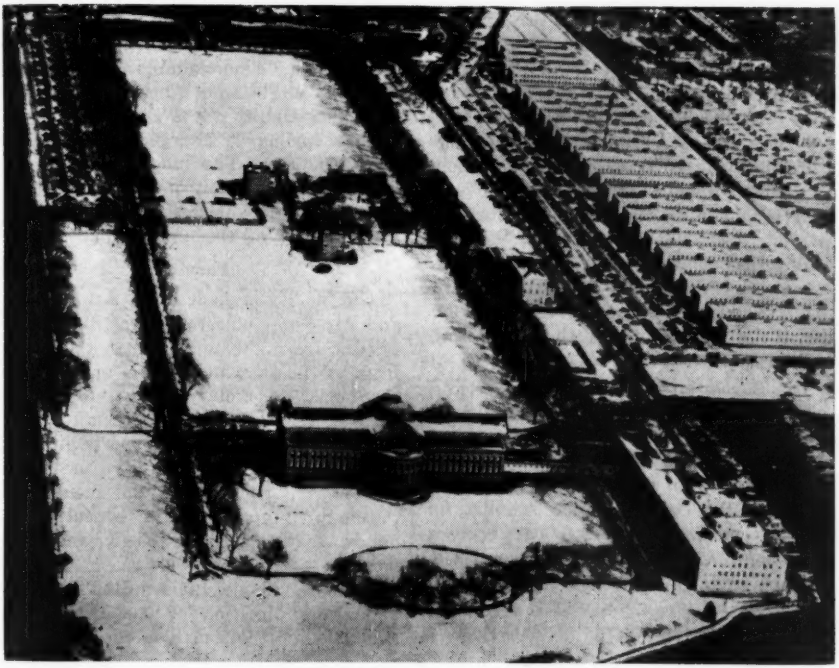
It was not until December 1943 that the College resumed operations. Again there was an acute shortage of officers in all the services who were familiar with complexities concomitant with the termination of war contracts. Within two years, and shortly after VJ-day, over four thousand officers and civilians had been trained in the contract termination courses. The Army Industrial College had one more mission to perform—that of analyzing and evaluating experiences gained during World War II in the fields of industrial mobilization, production, procurement, and demobilization. To accomplish this mission a six-month "interim" course was set up in January 1946, designed also to prepare a future curriculum for the College. "Mission accomplished" was signalled by the completion of the course in June of that year. Finally, after twenty-two years of sound and progressive advancement the Army Industrial College suspended its functions.

However, the equal importance of military logistics and economic mobilization with strategy and tactics had been acknowledged. On 11 April 1946 the Army Industrial College was redesignated as the Industrial College of the Armed Forces, with an academic year of ten months duration. Henceforth, the Under Secretary of the Army and the Assistant Secretary of the Navy would exercise joint control of the College. With the National War College, on the highest level of military educational institutions, it became operational in September 1946.

But today, who are the students? How is the college organized? Who comprise the faculty? What is the curriculum? How are the studies performed?

Selection of Students

The student body is made up of selected officers from all of the services. Manifestly, qualifications are subject to change. Current instructions of the Army and Air Force prescribe that student officers selected for the course will be chosen from the highest rated officers otherwise available who have a minimum of ten years commissioned service (including commissioned service in civilian components), are less than 46 years of age, are physically qualified for general service, and have indicated by actual performance of duty a



Fort Lesley J. NcNair, at Washington, D.C., above, is the location of the Industrial College of the Armed Forces. Selected officers of all the services study America's industrial potential at the college; lower left, a student seminar. At the lower right, the entrance to the Industrial College.

potentiality for high command and staff position relative to supply, procurement and industrial mobilization.

Nominations of Army officers are made by the Chief, Army Field Forces, and the chiefs of administrative and technical services on a world-wide basis and forwarded to the Director of Personnel and Administration. Final selection of students is made by the Department of the Army.

Selection of student officers from the Air Force is made by the Deputy Chief of Staff, Administration and Personnel, under the direction of the Chief of Staff, United States Air Force.

The Bureau of Naval Personnel selects, without regard to availability, a list of officers who, on their service reputation and record, are considered to be the outstanding officers of the class group eligible for the course. From this list an officially constituted selection board chooses the names of the foremost officers who have a high potential for selection to the next higher rank and from these final selection of students is made by the Chief of Naval Personnel. Naval officers eligible for the course at present are captains and commanders with approximately fifteen to twenty years service. The Naval group is apportioned to include approximately 50 per cent line officers and Marines, 20 per cent Engineering Duty Only officers, and 30 per cent staff corps.

Organization

The College is organized as indicated in the accompanying organization chart. The organization is simple and direct, and decentralization of guidance and teaching is effected by having each of the teaching divisions in complete charge of the students during the investigation of its designated field. The major functions of the Commandant are those normally found to be the responsibility of any college president and of a military commander. The Commandant is a general officer of the Army or Air Force or a flag officer of the Navy. The duty is rotated between the services. Two deputy commandants are provided from the services not furnishing the commandant. One of these Deputy Commandants is primarily charged with administrative affairs. The other serves as Director of Education and is principally concerned with the arrangement and implementation of the curriculum.

Faculty

The faculty is made up of Army, Navy, and Air Force officers, and civilians. The officers are highly qualified in those subjects or fields which make up the curriculum of the College. The civilian members of the faculty are especially qualified and are recognized experts in their respective fields. Collectively, the officer and civilian members of the faculty are thoroughly familiar with education, finance, industry, government, and commerce.

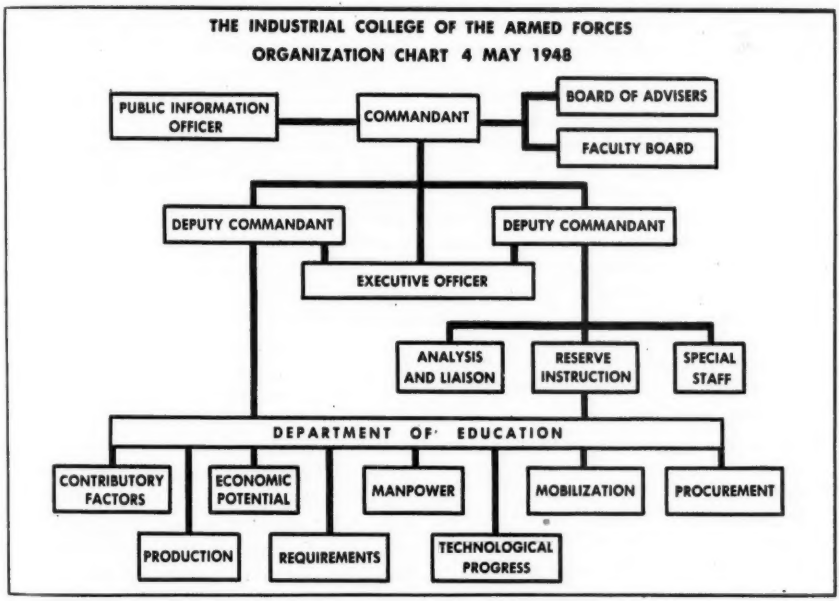
The Analysis and Liaison Staff functions under the direction of the Director of Analysis and Liaison. The mission of this unit involves both liaison and analytical functions, as well as instructional and consultative duties. In general, the Analysis and Liaison Staff maintains liaison with other agencies of the Federal Government, research foundations and universities, professional, technical, and scientific societies, and with industry, securing for the College information on current developments and techniques related to economic mobilization.

In addition to its liaison and coordinative functions, the Analysis and Liaison Staff conducts technical analysis of topics of special interest in industrial mobilization not covered by other units of the College, particularly from the standpoint of future developments, and prepares appropriate analysis.

The unit also assists in the program of instruction, serves in an advisory and con-

sultative capacity, and arranges seminars and informational conferences at which specialists discuss subjects connected with industrial mobilization which are beyond the scope of the Department of Instruction.

The Special Staff of the Industrial College of the Armed Forces functions under the Deputy Commandant. This group is charged with observing the progress of instruction to include teaching techniques and methods. It is constantly reviewing the curriculum both as to scope and material to be presented in order that the student body will be kept abreast of constantly changing conditions in the field of economic mobilization. Reading lists are prepared for incoming student officers. It prepares and develops cases and testing methods in order to develop effectively analytical reasoning and presentation. The staff has general supervision over, and makes arrangements for, field trips of the students whereby practical work may be observed. It plans and secures lecturers for subjects of wide interest or those beyond the scope of other branches of the College.



Special Course

Although the Industrial College of the Armed Forces has the primary function of indoctrinating career military personnel of the armed forces in the field of economic mobilization, the number of officers trained is inadequate to meet the requirements of a sudden war emergency. It is necessary, therefore, to augment the regular group by an extensive body of qualified Reserve Officers, civilian executives of industry, and educators.

To satisfy this essential need the Industrial College, through the Reserve Instruction Branch, offers a condensed version of the regular course to selected personnel. Qualified Army, Navy, and Air Force instructors from the faculty of the

Industrial College of the Armed Forces present an abridged course in principal cities of the United States throughout the school year. The course covers a two weeks period and is presented to Reserve Officers of the Army, Navy and Air Force, industrial executives, educators, and prominent civilians. Instruction covers the broad field of economic mobilization, including procurement planning, economic warfare, and industrial mobilization. Such an intimate exchange of views, thoughts, and problems between the College and prominent civilians will indeed produce incalculable dividends as the years go by.

Teaching Divisions

The eight branches indicated in the last line of the organization chart are teaching divisions and it is with these divisions that the student is most intimately acquainted. Each branch conducts instruction and analysis in its designated field during the period of time allotted for that purpose. A description of these branches can be obtained most easily by an inspection of the curriculum during 1947-48. During the academic year 1947-48 the teaching branches conducted instruction and analysis as follows:

a. Economic Potential investigated certain foreign countries for seven weeks with an objective of evaluating the economic potential of each country under consideration. Manifestly, such subjects as important minerals, metals, agriculture, energy sources, power, geography, manpower, industrial capacity and production were investigated as well as others pertinent in assessing the economic potential of a nation.

b. Technological Progress spent six weeks investigating the role of research and development in maintaining security-research in the United States, analysis of methods in major munitions development; coordination of research and development in the United States and a review of research and development in selected fields of major importance.

c. Concurrently, the Requirements Branch investigated military end-item requirements determination, raw material requirements determination, factors affecting determination of requirements such as replacement, stock level, and pipe line; civilian, foreign aid, and economic warfare requirements, and current methods used in industry to determine production goals.

d. For five weeks the Purchase Branch investigated the process of organizing for wartime procurement, pricing policy and methods, placement, financing contractors, policy governing renegotiation and termination of contracts, and price and wage stabilization.

e. Concurrently, the contributory Factors Branch investigated distribution, maintenance and repair, packaging and packing, storage, communications, power, fuel and water.

f. For eight weeks the Production Branch investigated material shortage, materials allocations, facilities, inspection, spare parts, standardization, and the automotive, ship building, aircraft, weapons, electronics, and textile industries.

g. For five weeks Manpower investigated population utilization of manpower, social factors, labor-management relations, selective service, and manpower controls.

h. And finally, for five weeks, the Mobilization Branch investigated the field of organizing and administering the United States in a future emergency. In this unique problem each student committee must produce an organization which, in its opinion, will be best suited to mobilize and administer the United States in a future emergency. No theoretical changes in the Constitution were permitted or assumed.

Towards the end of each academic year the College conducts a course known as the "field trip." Students are divided up into small groups and each group travels

to an industrial area. There, for one week, conducted tours and prearranged inspections are made in the major and most important plants in that area. In this manner first hand information is gathered from a viewpoint at the level of a worker to that of a president or executive of a corporation.

Methods of Instruction

In view of the broad and varied fields of study at the College, what are the methods of instruction and study? First, the College does not believe that it is sufficient to give the student factual information of the past. The College hopes, rather, to prepare the student so that he can recognize problems, determine issues, evaluate facts, and reach considered decisions as he works in the various fields of economic mobilization. Hence study and instruction at the College take on many forms. Small study groups are formed and are assigned problems for which there are no mathematical or "textbook" answers. By far the greatest portion of the students' time at the College is spent on such assignments. Lectures also play an important role in instruction. They are given by members of the faculty, selected individuals of the armed forces, government officials, and civilians of local or international reputation who are in those fields included in the College curriculum. Besides these lectures, students at the College must attend about 75 per cent of the lectures given at the National War College. Seminars are also rather frequent, with acknowledged experts being invited so that by discussion a more detailed examination can be made of the subject being investigated. Reading, assigned or voluntary, is another important method of instruction and is constantly practiced at the College. When opportune and practicable, consultations and interviews by the students are encouraged with anyone who can further exploit or develop the subject matter under investigation. And lastly, oral presentations are made to the assembled student body on the findings, reports, conclusions, and recommendations of the committees assigned to the various subjects. By this method the student can benefit from the research of others.

In a future emergency our national economy must be mobilized and administered as never before. Industrial mobilization is not enough. Total economic mobilization is mandatory. There still exists a great gap in our knowledge of how to organize and how to administer our national economy in the event of an emergency. The continued existence and growth of the Industrial College of the Armed Forces will help bridge that gap.

Superiority in the air and on the sea, in ground mobility and fire power, based on industrial output, gave our combat forces superiority at the points chosen for attack. In the future, military readiness must include industrial readiness; and industrial mobilization must be an integral part of defense mobilization. Effective organization, and the enabling legislation required, merit a priority in our security planning.

General of the Army Dwight D. Eisenhower

The Armistice of Cassibile

Dr. Howard McGaw Smyth

This is the second of two articles by Dr. Smyth on the events connected with the Italian Armistice in 1943, from his book which will be published as Volume II, of the History of the War in the Mediterranean Theater, *a six volume series being written as part of the* Official History of the U.S. Army in World War II. *Printed by arrangement with* Military Affairs.—*The Editor.*

The Italian Government Decides to Renege

AT Cassibile, after working with the Allied officers on the Outline Plan for GIANT TWO, General Castellano was informed by General Smith that General Eisenhower wished to have an Italian Military Mission attached to AFHQ, a mission with representatives of the Italian ground forces, air and navy and which Castellano would head. Castellano on 4 September wired a request to Rome for authorization and constitution of such a mission. At the same time Castellano was informed that the Allies wished to send a special mission to Rome—the mission undertaken on 7 September by General Taylor and Colonel Gardiner.

After seeing several Allied officers during the afternoon, in regard to various aspects of the announcement of the armistice, General Castellano prepared his reports to his Government. These included:

(1) A copy of the Short Terms of armistice which Castellano had signed.
(2) A copy of the Long Terms and the attached note addressed by General Smith to Marshal Badoglio;
(3) Instructions for the movement of Italian warships and shipping;
(4) Instructions for Italian aircraft;
(5) General Alexander's instructions regarding sabotage;
(6) An aide-memoire regarding the information service (methods for announcing the armistice);
(7) The outline plan for GIANT TWO, and
(8) A personal letter of Castellano to General Ambrosio.

Save for the letter, the documents were all in English but before they were flown to Rome Montanari had made translations of some of them. In the letter to General Ambrosio, Castellano wrote:

> Despite every possible effort to succeed, I have not been able to get any information on the precise locality of the landing. Regarding the date I can say nothing precise; but from confidential information I presume that the landing will be able to take place between the 10th and 15th of September, possibly the 12th.

Castellano's documents and the letter to General Ambrosio were flown back to Rome by Major Marchesi and Major Vassallo early on the morning of 5 September. The documents, including the Outline Plan, were delivered to General Ambrosio, Chief of the Supreme General Staff, who in turn submitted them to Marshal Badoglio. Castellano had made his forecast of 12 September with some doubt. According to Badoglio, however, Ambrosio stated to him that 12 September could be regarded as certain.

With the armistice signed, and with the Outline Plan delivered to the Italian Supreme General Staff, it was to be expected that the Italian High Command would make vigorous efforts to insure its success. However, even after the Armistice had

been signed, the tug of war continued among those immediately under Marshal Badoglio—between those who, like Castellano, hoped to save the House of Savoy and the future of Italy by unreserved adherence to the Allies, throwing the Italian army to the Allied side, and others, the older and more cautious men, who wished a purely passive attitude, who would accept the Armistice only if it were a certainty that the Allies would rescue the Italian Government. Neither group showed much comprehension of how the Italians were regarded by British and American public opinion; certainly there was nothing to justify a belief that the Italian soldiers would be welcomed as comrades in arms of the Allies; there was even less reason to believe that the Allied generals would make their supreme objective the rescue of the Italian Government from the threat of a German *coup d'etat.*

On 4 September General Ambrosio delivered to each of the heads of the three armed services a written document embodying a directive on the conduct to be observed in case of aggressive action by the Germans. General Roatta thereupon sent a memorandum to the commands dependent upon him, a memorandum which summarized and complemented OP 44. The original of this document was destroyed: each person to whom it was addressed was ordered to burn his copy. It prescribed, however, that the Germans were to be considered as enemies at the least hostile action and in such a case German units were to be attacked, and isolated and their supplies were to be destroyed. The primary commands receiving this order were directed to pass it on to their respective units with appropriate instructions in detail for its execution.

General Roatta had by 3 September

Although the Italians faltered on plans for an Allied air landing at Rome, the armistice of Cassibile gave assurance that they would not support the Germans in opposing the major Allied landing at Salerno

About the last day of August or the first of September the Italian Army General Staff prepared a memorandum, OP 44, containing a general directive for all the commands dependent upon it, that in case of any action by the Germans they were "to react with decisive conduct." Then on 3 September, when Castellano with authenticated full powers, had signed the armistice, Marshal Badoglio called together the three heads of the armed forces (Roatta, Chief of the Army General Staff; Sandalli, Minister of Aviation, and Admiral de Courten, Minister of the Navy) and announced that, "His Majesty has decided to begin negotiations for an armistice." The Marshal gave the order to each to make appropriate dispositions, but declined to put the order in writing for fear of its becoming known by too many persons.

made certain dispositions for the defense of Rome against a surprise German attack. There were three army corps, dependent on the Army General Staff, for the defense of the capital:

1. The *Corpo d'armata di Roma,* consisting of the 12th Infantry (*Sassari*) Division, the *carabinieri,* service and school troops within Rome. The task of the corps was to oppose the S.S. and other special German troops stationed in Rome.
2. The *XVII Army Corps,* commanded by General Zanghieri. This consisted of the 220th and 221st coastal divisions which were distributed in small detachments along the coast all the way from Tarquinia to the Volturno, a distance of 310 kilometers, and the 103d Infantry (*Piacenza*) Division. Its battalions, stationed at Lanuvia, Velletri, Genzano, and along the Rome-Ostia highway, were interspersed among units of the German 2d Parachute Division.
3. The *motorized corps,* commanded by General Giacomo Carboni, which consisted of:
   (1) The 21st Infantry (*Granatieri*) Division, stationed immediately south of Rome.
   (2) The 132d Armored (*Ariete*) Division, near Lake Bracciano, and guarding the Via Claudia and Via Cassia.
   (3) The 10th Infantry (*Piave*) Division, in an arc to the north of Rome between the Via Cassia and the Via Tiburtina.
   (4) The 131st Armored (*Centauro*) Division, in the area near Tivoli and *Guidonia* airport.

Upon receiving the information from the Supreme General Staff that the armistice had been concluded, and that it would be announced 12 September, General Roatta issued orders for a regrouping of the units near Rome, to be completed by the morning of 12 September, presumed date of the armistice announcement. The *13th Infantry (Re)* Division and the *7th Infantry (Lupi di Toscana)* Division would arrive from the Balkans and France on 8 September and reinforce the defense of the capital. The motorized corps (*Piave*, *Ariete*, and *Centauro* Divisions) to which would be added the *18th Bersaglieri* Regiment were to constitute a mass for maneuver, to undertake counterattacks against the Germans or to join up with the main Allied landing on the coast of Lazio.

The Italian Army General Staff was still making its preparations to aid the Allies against the Germans when the armistice was announced, but were acting in expectation that the Allies would land a large force near Rome, and that the armistice would not be announced before 12 September. Neither of these expectations was justified in any way by what had been communicated to Castellano.

On the morning of 5 September, as we have seen, Major Marchesi and Major Vassallo arrived in Rome with the documents and reports from General Castellano, including the Outline Plan, and these were submitted to Marshal Badoglio by General Ambrosio. According to Monelli, Ambrosio on that same day informed both Roatta and the Minister of Aviation (Sandalli) of the plan, instructing them to prepare the *Cerveteri* and *Furbara* fields for the arrival of the American airborne division. Roatta, however, asserts that it was only on the morning of 6 September that the *Comando Supremo* furnished him with a copy of the Plan. Sometime during that day secret messages were sent by the Allied Headquarters making arrangements for General Taylor and Colonel Gardiner to come to Rome in order to make final arrangements for GIANT TWO. General Ambrosio left town for his home in the north—although he knew of the impending mission—and the next day, 7 September, declined the suggestion that he fly back to Rome when the rank of the officers on the mission was learned. Having encouraged and supported Castellano in his negotiations with the Allies, Ambrosio ducked out at the critical time when it was necessary to convert the plan of immediate armed cooperation with the Allies into reality. Ambrosio's absence permitted the *Comando Supremo* to repudiate Castellano's project for GIANT TWO, and to attempt something which had to the Allies every appearance of a double-cross. During the two days that Ambrosio was away (6-8 September), Roatta, Carboni, and General Francesco Rossi, Deputy Chief of the *Comando Supremo*, had free rein to promote the passive policy, and undo almost all that Castellano had achieved. Ultimate responsibility rested with the King without whose assent no fundamental decision could be taken. He had given the word for Mussolini's arrest, he picked Badoglio and the ministers, he promoted the attempts to secure a separate peace. Castellano's great efforts were made primarily to save the monarchy—to bring such a force and active aid to the Allies as would put them under obligation to the Royal Government. The situation called for vigor, consistent action, and the acceptance of some risks to avoid greater ones. The King's role, however, was cautious and negative. Nothing could be done without his consent, but only with difficulty could Badoglio learn what Victor Emmanuel III desired. He proposed nothing directly: he hid behind the shadow of a constitution that had been destroyed, insisting that Badoglio present fully formulated proposals which he would accept or reject. Marshal Badoglio who in a spirit of military obedience to his King accepted office and responsibility, was bewildered

by receiving no orders and was pushed by his subordinates from one direction to its opposite.

General Roatta, upon receiving the Outline Plan on the morning of 6 September was flabbergasted. To him it appeared to assign missions to the motorized army corps far beyond its capacities. Four hundred trucks were not to be had, except by putting *Piave* and *Ariete* divisions on foot. He seems never to have considered trying to collect auto busses and trucks from the municipality of Rome—something Castellano thought quite possible. The General Staff of the Air Force stated that it would need at least seven days to complete the technical arrangements for the air fields. Roatta considered that the plan for the airborne operation was not really a plan for the defense of Rome, but a step toward further operations from Rome as a base. He felt that if his forces had been strong enough to carry out all the actions assigned to them in the plan for GIANT TWO, they would have been strong enough to defend Rome from the Germans by themselves. It was not, in other words, an adequate and complex plan of rescue: rather it was a plan, embodying Castellano's policy, of cooperation by the Italian forces with the Allies. He was most disappointed to find no indication of the Allied plans for the landing of six divisions within striking distance of Rome—such as (he says) the *Comando Supremo* had informed him were to be expected.

What was even more disconcerting was the report, on the morning of 6 September, of Allied convoys assembling in the open sea north of Palermo. In the afternoon this intelligence was confirmed. This meant to him either that there was a secondary attack independent of and before the armistice announcements expected on the 12th, or else that the Allies would not strike near Rome but far south of it, or possibly in Sardinia. In discussing plans with the *O.B. Süd* (Kesselring) that same day Roatta stated that they (the Italians) expected the Allied attack in the region of Naples or in Apulia. In other words, Roatta on 6 September discovered that the main Allied attack would not be near Rome but in the region Naples—Salerno. He realized that the Allies would not be in a position to march directly on Rome, and that the Italians themselves would have to defend Rome. This is the essential fact which explains the contradictory and ambiguous conduct of the Italian Government during the next two days. All along the King and the group associated with him had been unwilling to run any risks but insisted on being rescued by the Allies. This wish to have the Allies close enough to strike at the mainland was back of the constant delays in bringing the plan to arrest Mussolini to a conclusion. In the spring of 1943 the King and his group decided to wait until the Allies conquered Tunis. Then after the fall of Tunis it was still not clear if the Allies intended to land in Italy—so there was more delay until the Allies undertook the Sicilian campaign. Then, after contact with the Allies was established, both Zanussi and Castellano repeatedly pressed the Allies to land near Rome—to rescue the Italian Government from the Germans. Now at the last minute, the painful discovery was made that the Allied convoys were heading for the Naples—Salerno area.

In the afternoon of 6 September, General Roatta presented his analysis of the situation to the Supreme Command: that because of the location of the Allied convoys there could be only two possible explanations of Allied intentions; either they were about to make a landing independent of the armistice like that of the British Eighth Army in Calabria on 3 September, or it was the main attack which would come before 12 September and would be directed against Southern Italy or Sardinia. Roatta therefore urged that the plan for the joint action with the Allied

airborne division be "adjusted" to the Italian Army's real possibilities. The Supreme Command, so he says, agreed on the necessity of modifying the plan for GIANT TWO.

Shortly thereafter Roatta conferred with General Carboni who agreed that his corps would not be able to put up a protracted resistance against the Germans without the reinforcements which were later expected, and without several more days of preparation. Without these reinforcements and without several more days it would also be impossible to provide effective protection of the American airborne division. Roatta drew up a memorandum embodying these objections to the plan for GIANT TWO, and emphasizing that the armistice should not be announced before 12 September, and that the Allied landing would have to be made in accordance with Italian expectations, *i.e.*, the main landing within striking distance of Rome. General Carboni transmitted the memorandum to Marshal Badoglio that same night, 6 September.

In their expectation of active Italian cooperation against the Germans, the Allied generals had suggested to Castellano, as we have seen, that an Italian military mission be constituted at AFHQ. The secret message inviting the Italian Government to send such a mission had been sent to Rome on 4 September. General Roatta and Carboni seized upon this opportunity of contact with the Allies to use the mission for the opposite purpose from that for which it was intended: they sought to convey new instructions to the Allies requesting fundamental changes in Allied plans.

Members of the Italian military mission were hastily selected and included twelve men in all. For the most part, these men do not seem to have been informed of the armistice which had been signed or of the other commitments made by the Italian Government through General Castellano. Major Alberto Briatore, however, was selected by General Carboni, who seems to have expected him rather than Castellano to act as head of the mission. He was furnished with a memorandum embodying new instructions for Castellano—instructions representing the opposite point of view from that which he had hitherto advocated.

The memorandum, prepared by the *Comando Supremo*, reads as follows:

September 6, 1943.

1. The attack of six divisions in the zone Salerno-Naples can be repulsed by the German troops, or at least contained.

For this reason, therefore, even in case that it succeeds, it takes place too far distant from Rome, it does not materially legitimize the request of armistice (a fact important either from the international or the internal point of view).

2. It is for this reason desirable that such a request (for armistice) take place some days later, when the troops debarked approach the capital, and—above all—when the larger debarkation (of nine divisions) impends.

3. Likewise it is extremely dangerous to make the request of armistice coincide (especially if it is concomitant or follows immediately the first landing) with the initiation of hostilities on our part against the Germans.

By doing this, even in the case that the Germans do not take the initiative, it would provoke the conflict while the six divisions (referred to in point 1 above) are still distant, and while the other nine are still at the points of embarkation.

In this case the Italian troops available for the defense of the Capital (less well armed than the German troops and short of munitions and oil) will be caught alone, for several days, certainly against two very efficient German divisions (the *2d Parachute, 3d Panzer Grenadier*), probably against the German divisions in the Campania (or a part of them), and—perhaps—after two or three days against those coming from the North (*Hitler Division, and 24th Panzer*). Our forces would not be able to resist and the capital would be lost.

4. If, for unavoidable reasons, the request for armistice cannot be postponed until the moment that the second larger debarkation impends (it would be better to make the request at the moment this attack is initiated) it is necessary at least not to initiate hostilities (against the Germans).

Therefore the intervention of the airborne division should not take place, for while it would not give any great support to the defense of the Capital, it would, however, compel immediately an armed collaboration, and it would bring about immediate conflict with the Germans in such conditions as to render failure most certain.

* * * * *

The members of the Italian Military Mission left Rome on the night of 6 September and were taken aboard the Italian corvette which made the rendezvous off Ustica Island. There they transferred to the British PT boat while General Taylor and Colonel Gardiner were taken

to Gaeta and thence to Rome. Early the next day, 7 September, General Francesco Rossi assured General Roatta that a radio message was being sent to Castellano charging him to inform the Allies that the Italian Government was sending certain communications of "fundamental importance." Roatta understood this to mean a plea to the Allied Commander in Chief not to make his final dispositions until he had a chance to consider these new communications from the Italian Government. Apparently Generals Rossi, Roatta, and Carboni believed that—although they themselves could not perform the specific tasks enumerated in the Outline Plan—the Allies were capable of anything, and could change plans completely even when the convoys were at sea.

That evening General Taylor and Colonel Gardiner reached Rome. General Carboni arrived at 2130 and gave the Americans his views of the military situation. The Germans, he declared had been building up their force in Italy ever since the overthrow of Mussolini 25 July, so that they now had greatly increased forces near Rome: about 12,000 paratroopers with heavy equipment including 100 pieces of artillery, chiefly 88-mm. The *Panzer Grenadier* Division, Carboni stated, had been raised to an effective strength of 24,000 men with 150 heavy and fifty light tanks. The Germans had ceased to supply the Italians with gasoline and munitions so that the *Motorized Corps* was virtually immobilized and had enough ammunition for only a few hours combat. He proceeded to give this estimate of the situation:

> If the Italians declare an armistice, the Germans will occupy Rome, and the Italians can do little to prevent it. The simultaneous arrival of U.S. airborne troops would only provoke the Germans to more drastic action. Furthermore, the Italians would be unable to secure the air fields, cover the assembly and provide the desired logistical aid to the airborne troops. If it must be assumed that an Allied seaborne landing is impossible north of Rome, *then the only hope of saving the Capital is to avoid overt acts against the Germans and await the effect of the Allied attacks in the South.* (italics mine). He stated that he knew that the Allied landings would be at Salerno, which was too far away to aid directly in the defense of Rome. He stated that General Roatta shared his views.

The American officers considered that regardless of the soundness of General Carboni's views, "he displayed an alarming pessimism certain to affect his conduct of operation in connection with GIANT TWO." They therefore omitted the interview which they had originally requested with General Rossi, and asked to see Marshal Badoglio at once. General Carboni escorted them to the Marshal's villa where the household was awake as a result of an air raid alarm, about midnight.

General Carboni was received at once by the Marshal while the American officers waited in the ante-chamber. After about fifteen minutes they were admitted and greeted cordially by the Marshal.

General Carboni apparently used the fifteen minutes in order to bring Marshal Badoglio completely around to his point of view, that is, a full acceptance of the "wait till they rescue us" school of thought. The interview with the Chief of State was in French, spoken both by Marshal Badoglio and General Taylor, supplemented by English-Italian as conveyed by Lieutenant Lanza. Marshal Badoglio repeated the figures on German troops exactly as they had been stated by General Carboni and advanced the same proposals: The armistice would have to be postponed; Operation GIANT TWO would have to be cancelled.

When General Taylor asked Marshal Badoglio—who made repeated professions of sympathy for the Allies—how he expected the Allied chiefs to react to this change of attitude, he expressed the hope that General Taylor would return and explain the new situation and the Italian point of view to General Eisenhower. This General Taylor refused to do: but if so instructed by the Allied command he would consent to serve as a messenger for whatever Marshal Badoglio wished to communicate. What was necessary, said General

Taylor, was to send to Allied Headquarters a definite statement of Italian views over Badoglio's own signature. In face of the refusal of the American officers to become advocates of Badoglio's new point of view, he accepted the responsibility himself and drafted a message for General Eisenhower—a message cancelling all his earlier commitments:

Due to changes in the situation brought about by the disposition and strength of the German forces in the Rome area, it is no longer possible to accept an immediate armistice as this could provoke the occupation of the Capital and the violent assumption of the government by the Germans. Operation GIANT TWO is no longer possible because of lack of forces to guarantee the air fields. General Taylor is available to return to Sicily to present the views of the government and await orders.

Badoglio.

At the same time General Taylor drafted a message of his own:

In view of the statement of Marshal Badoglio as to inability to declare armistice and to guarantee fields GIANT TWO is impossible. Reasons given for change are irreplaceable lack of gasoline and munitions and new German dispositions. Badoglio requests Taylor return to present government views. Taylor and Gardiner awaiting instructions. Acknowledge.

Taylor.

The messages were drafted shortly after 0100 8 September. Marshal Badoglio implored the American officers to trust him, swore that there was no trickery involved in his change of front, and spoke at some length of his honor as a soldier and officer. It was late that night when General Taylor and Colonel Gardiner returned to the Palazzo Caprara and the messages were turned over to General Carboni for coding and secret transmission to AFHQ.

In order to make sure that the Allied Command understood the situation in Rome, a third message was drafted by General Taylor at 0820 that morning:

Summary of situation as stated by Italian authorities. Germans have 12,000 troops in Tiber valley. Panzer Grenadier Division increased by attachments to 24,000. Germans have stopped supply gasoline and munitions so that Italian divisions virtually immobilized and have munitions only for a few hours of combat. Shortages make impossible the successful defense of Rome and the provision of logistical aid promised airborne troops. Latter not wanted at present as their arrival would bring an immediate attack on Rome. Source of these views Marshal Badoglio and General Carboni.

Taylor.

Word had come back at about 0800 of the receipt at AFHQ of Marshal Badoglio's message, but General Taylor was not certain that his message cancelling GIANT Two had been received. At 1135 he sent off the simple code word "situation innocuous" which by prearrangement was the signal for cancelling the airborne operation. Longer messages were requiring as much as three hours for encoding, and the first lift, General Taylor knew, was scheduled for 1830 that same day.

The Italians were greatly concerned over the possible reaction of the Allied chiefs to their reversal of position on the armistice. Marshal Badoglio decided—in order to make sure that his new viewpoint was understood by General Eisenhower—to send a high staff officer with "communications of fundamental importance" similar to those entrusted to Major Briatore on the 6th. General Roatta drew up a memorandum almost identical to that which he had had composed two days earlier. General Francesco Rossi, Deputy Chief of the Supreme Command, was chosen to persuade General Eisenhower to make no mention of the armistice while the Salerno landing took place: meanwhile the Italian Government would wait and see how it came out, and when the Allies were in a position to seize Rome the Italians would join them.

General Ambrosio returned to Rome on the afternoon of 8 September, and an interview with General Taylor and Colonel Gardiner was arranged for 1830. About 1500, however, a message was received from AFHQ ordering the American officers to fly directly to Tunis. Although the Allied authorization for General Rossi's visit had not been received, the Americans took him and his interpreter in the three-motor Savoia-Marchetti bomber which was placed at their disposal. They took off from *Centocelle* air field at 1705 and flew straight to *El Aouina* where they arrived at 1905. From there they were driven to "Fairfield"

to report to the Allied Commander in Chief.

* * * * *

Marshal Badoglio's change of mind and message that the armistice could not be "accepted" were a shock to AFHQ, but General Eisenhower was not deterred from announcing the armistice. He informed Marshal Badoglio that he would broadcast the news that same evening, and that if the Marshal failed to follow suit as had been agreed, it would mean the dissolution of his Government. Rather tardily the Marshal complied. Announcement of the armistice cleared the way for the impending attack by the Fifth Army at Salerno. It assured the Allies that Italian units would not support the Germans in opposing the first major Allied landing on the Continent. Salerno was touch and go: had Italian troops aided the Germans the balance might have favored the defenders. After GIANT TWO was cancelled the Italian Government was left with only its own troops to defend the capital and early on the morning of 9 September, the King, Marshal Badoglio, and the military members of his cabinet left Rome. What might have happened had GIANT TWO been executed is one of the "ifs" of World War II.

The broad strategy behind our main effort against the German war machine included as a highly desirable preliminary the successful conclusion of operations in North Africa and their extension across Sicily to the Italian mainland. With these accomplished, with the Mediterranean "flank" freed for Allied shipping, and with the necessary special equipment built or in sight, we were at last in a position to prepare for the final cross-Channel assault which had been agreed upon since April 1942 as our main operation against Germany.

General of the Army Dwight D. Eisenhower

It has been declared axiomatic that a nation cannot successfully wage war on two fronts. With a full appreciation of the difficulties and hazards involved, we felt compelled to wage war not only on two fronts, but on many fronts. Thus we arrived at the concept of global war in which the vast power of American democracy was to be deployed all over the earth.

General of the Army George C. Marshall

The Public Information Officer

Lieutenant Colonel John H. Minton, *Cavalry*
Former Instructor, Command and General Staff College

Public Relations

BACK in 1938, our mobilization regulations stated in part, "Public relations includes all duties pertaining to publicity; relations with the press, periodical, radio, pictorial, newsreel, and photo-play services, and civic and patriotic organizations; the authorization and control of visitors; and the dissemination of information to the public."

By way of comparison, Army Regulations 600-700, in the latest revision dated 16 August, 1946 reads, "Public relations is defined as any planned program or procedure which will elicit public understanding and good will. It includes continuous dissemination of information to the public, participation in community life, and a line of conduct by uniformed personnel which will contribute to public understanding and appreciation of the military service. Proper public relations planning will seek to anticipate any action or situation which may tend to diminish the prestige and good name of the Army."

This new definition clearly brands as false the idea sometimes entertained by commanders, and even public information officers, that the public information officer is only the publicity agent for the command, or occasionally, solely for the commander. Reading further in the same Army Regulation, one finds that the duties of a public relations officer (changed to public information officer by War Department Circular No. 100, dated 18 April 1947) include: "Advice to the commanding officer on public relations matters, particularly on relations between the command and the nearby community." This duty is specifically listed in addition to the duties of maintaining liaison with civilian groups, assisting local and national news media, and reviewing and disseminating information to the press and public. All this sounds like a pretty large order, as indeed it is, particularly if we are to adhere to the high standards of efficiency essential to military operations.

For a more complete basis of understanding of the public information officer, his duties, and essential qualifications, one should consider the meanings of several additional terms that are gradually attaining more common usage. These are "the Army's public," "public relations counseling," and "public information."

The Army's Public

The Army's public is of course the entire citizenry of the United States, because the Army only exists as a servant of the nation and the nation exists only for the people. When one is studying the public it must be considered in three general groups. These are: The national public, which includes all of the people of the nation; the local public, comprising the people of the community adjacent to the specific Army installation; and the organic public, or the personnel, military or civilian, assigned to or employed at the Army installation.

These three elements of the Army's public are influenced in varying degrees by what the Army is, does, and says. The organic public sees the Army at close range, hears about it at first hand, and feels the impact of orders issued and actions taken by Army authorities. The local public sees much of the local Army personnel and hears a great deal about it from those who have seen and "felt" the Army. The national public, however, is influenced almost entirely by what it reads and hears about the Army.

Public relations counseling in the Army involves first, the making of a continuous study of all the factors that influence relations between the Army and the public; second, determining the probable effect upon the Army's relations with the public, of the conduct, attitudes and statements of military personnel and of specific military actions and orders, or the lack of appropriate military actions and orders; third, providing the commander and his staff with sound advice on all public relations matters, and fourth, preparing general and specific public relations programs.

Public information is all the information about the Army that does not need to be classified. This includes all information except that which would help the enemy or injure our relations with our allies.

It must be remembered that the maintenance of good public relations is a command function that cannot be delegated but is inherent to the proper exercise of command from the highest to the lowest levels. However, public relations counseling and public information activities are the two staff functions of the public information officer.

Qualifications of the PIO

Before deciding what sort of individual should be selected as a public information officer, one should briefly consider one of the popular misconceptions along this line—namely, that the ideal military public information officer is a former newspaper or publicity man. The well-known editor, Eric Hodgins, in an article entitled, "Gentlemen of the Press," appearing in the November 1946 issue of *Army Information Digest*, rather thoroughly explodes this erroneous concept. Mr. Hodgins writes, "The experience of World War II brought out a curious fact: the worst public relations officers in the armed services were, on the whole, those men who had followed something similar as a career as civilians and, who, now in the Army, felt themselves clothed with the rank and authority whereby they could command something which in the past they had only been able to supplicate. There were of course exceptions. But in general, the younger professional soldier or the reserve officer, who had not in civil life been associated with the career of publicity man, did an outstandingly better job."

The Public Information Officer need not be a specialist in public relations, but he must have character, energy, personality, common sense, and—most important—good knowledge of the military profession

In the August 1946 issue of *Army Information Digest*, Major General Floyd L. Parks, Chief of the Public Information Division, Special Staff, United States Army, stated his views on the basic qualifications of a public relations officer in an article entitled, "A Creed for Army Public Relations." General Parks wrote, "The basic approach of the public relations officer to his job should be the same as that of any other officer—indeed, of any man in the United States Army. The same high standards apply, whether the

job is in artillery, in the air, in mechanized operations, or in public relations. The first quality that an officer must have for any duty is character. First, character; second, good, common, horse sense, coupled with a sense of responsibility; third, health and energy; fourth, an agreeable personality; and fifth, knowledge of the profession. If he has the first four, he can readily gain and effectively employ knowledge of the profession."

It would be unfortunate, however, if this sound concept should be misinterpreted to mean that a newly appointed second lieutenant with the first four qualifications listed above could easily become an efficient public information officer. Such an individual might become a publicity agent but his effectiveness as a public relations adviser would be limited by his limited experience and limited over-all knowledge of the Army and Army methods and of human nature, public opinion, and the factors that mold it. While it is true that a very junior officer might easily learn to apply the principles of public relation counseling, his lack of understanding of over-all military problems would seriously limit his ability to formulate and present to other members of the staff and to his commander a sound, logical public relations program. He could not be expected to possess the maturity of judgment needed to correctly evaluate all of the factors affecting the public's opinion of the Army, and, like the older officer commissioned directly from civilian life, his ability to interpret the Army to the public would be as limited as was his over-all knowledge of the Army.

However, as General Parks has indicated, the qualifications of the public information officer must be basically the same as that of any other staff officer. Therefore, he should be a professional or a reserve officer whose level of military education and experience, and knowledge of the public relations profession, is at least equivalent to that possessed by a graduate of the Command and General Staff College, and the public information course of the Army Information School. Then, and only then, will he possess the broad knowledge and understanding of the Army and of the public that is essential to successfully interpret each to the other.

An officer so qualified, when appointed a public information officer, will approach his duties in the same general manner as any other properly trained staff officer. He will make an estimate of the situation, prepare the necessary staff studies, obtaining the concurrence of other interested staff officers, and will present his recommendations to his commander through the chief of staff. The approved recommendations will become the public information plan or the public relations plan as the case may be, for the entire command.

The PIO as a Staff Officer

To obtain sound data for his staff estimate of the public relations situation, the public information officer will follow some definite plan similar to the following: First, he will analyze the past, current, and future operations of the Army and the specific military installation by discussing them with other staff members. Second, he will determine the attitudes and opinions of soldiers and civilian employees, by discussing them with the troop information and education officer, the inspector general, the personal affairs officer, the chaplain, the special services officer, and appropriate subordinate commanders. Third, he will determine the attitudes and opinions of the local public and local news disseminating media by discussing these with newspaper editors, radio broadcasting station managers, and leaders and members of all types of local civic, religious, educational, veteran, commercial, and governmental organizations.

His staff estimate of the public relations situation will follow the same gen-

eral lines as any other staff estimate of the situation. Paragraph 1 should clearly state the mission of the command and also its public relations mission. Paragraph 2 should include brief statements of the attitudes, actions, and statements of military personnel and of the public which affect public relations, together with an evaluation of the known or probable impact of these on the opposite groups. Paragraph 3, although not always used, should be reserved for a statement of enemy capabilities affecting public relations (propaganda aimed at minority groups, the actions of subversive elements, release of false information, radio jamming, as well as the possibility of enemy use of information that would otherwise help maintain public confidence should be entered here). Paragraph 4 should discuss the advantages and disadvantages of all appropriate courses of action. Paragraph 5 should contain the preferred courses of action listed as conclusions.

Paragraph 1 could, of course, be filled in by any staff officer. Paragraph 2 however, requires the development of expert knowledge of the public, public opinion, and the factors that mold it. It requires that the public information officer spend a considerable amount of time in the community or communities adjacent to the military installation doing the research work that has already been referred to. It requires a considerable knowledge of the probable effect of all proposed actions and operations by military personnel. It also requires considerable skill in gauging soldier opinion which is doubly important because it has been well established that soldier opinion and public opinion of the Army are usually similar. Paragraphs 3, 4, and 5 require common sense and a sound over-all knowledge of military as well as public relations consideration.

Having completed his staff estimate of the public relations situation, the public information officer next carefully examines Paragraph 5. This will be found to contain two general types of conclusions. First, there will be those items that may be accomplished by the public information section, and may, therefore, be included in a *public information* program. Second, there will be those items that must be accomplished by subordinate commanders or other staff sections, but which, because they have a direct or indirect bearing on public relations, must be included in a *public relations* program. For instance, if one of these conclusions was that a series of local stories with photographs each featuring the promotion of an enlisted member of the command should be used to inform the local public about the Army's new enlisted career plan, such an item would be part of the public information plan because, if approved, the public information officer would accomplish it. However, if it were concluded that appropriate command action should be taken to raise the standard of conduct of the personnel while in town, because of the effect of their conduct on the Army's relations with the local public, this obviously could only be part of the public relations program of the command, but not a part of the public information program.

In order to present his conclusions regarding the actions that should be taken to maintain good relations with the public in a concise and coherent manner to other interested staff officers and to the commander, he must prepare one or more complete staff studies. These should be based upon Paragraph 5 of the estimate of the public relations situation and should follow the standard form for a staff study. Paragraph 1 should contain a statement of the problem, Paragraph 2 should contain a suitably detailed discussion of it, and Paragraph 3 should clearly state the recommendations. These recommendations should be supported by such annexes as are

needed to comply with the doctrine of completed staff work. Concurrences or nonconcurrences from all other interested staff officers should be obtained.

Keeping the Public Informed

The Army's relations with the public are affected by everything that the Army is, or does, or says, officially or unofficially. Therefore, there is no limit to the matters that may appropriately be discussed in a staff study on public relations or included in a public relations program. In general, however, a public information program should provide for furnishing the public with the maximum amount of unclassified information about the Army in general, and the specific establishment in particular. It should make appropriate and timely use of all available means of disseminating information to the public such as newspapers, magazines, radio broadcasts, military speakers, special events, and community relations councils. In addition, it must be remembered that the military and civilian personnel of a military installation pass on to their friends and acquaintances a great deal of the unclassified information they possess about the Army, which, of course, is slanted by their personal opinion of the Army. No commander or public information officer can afford to overlook this channel through which information reaches the local and national public. A sound public information plan must provide for complete and accurate dissemination of all timely, pertinent unclassified information about the Army to all members of the command and all civilian employees.

Assignment as PIO

Occasionally one encounters an individual who expresses the erroneous belief that if one acquires the military occupational specialty number of a public information officer he is tending to stray from the ladder that leads to higher command. This is, perhaps, the reason why some officers hesitate to seek training and experience in this important field, and some commanders fail to select the most suitable individuals for this staff assignment.

Actually the most successful World War II commanders of United States forces have been keenly aware of their responsibilities for reporting, not only to the President and to Congress, but to the people of the United States as well. General of the Army Dwight D. Eisenhower is quoted in Army Talk Number 169, dated 5 April 1947, entitled, "Soldier Public Relations," as stating that: "National security is a state of organized readiness to meet external aggression by quick and effective mobilization of *public opinion, trained men, proved weapons,* and *essential industries,* integrated into the most effective instrument of armed defense, and reinforced by the support of every citizen, in the measure and form necessary for the preservation of our way of life."

Accepting this obviously accurate concept of the importance of public opinion as the most essential basic ingredient of national security, it is clear that, other qualifications being reasonably equal, the officer who is a trained, experienced public information officer is better qualified for high command than the officer who lacks this experience.

Supply Build-up in Amphibious Operations

Lieutenant Colonel Lyle W. Bernard, *Infantry*

The following article is one of the monographs prepared by officers attending the 1946-1947 class of the Command and General Staff College.—The Editor.

General

THIS study covers the general supply aspects of four typical amphibious operations. Selection was made with a view to analyzing the effect of the type of operation, the nature of the target area, the size of the force involved, the mission of the operation, and planned future actions, on the amphibious supply picture. To give this picture the broadest possible scope, operations have been considered from both theaters and cover attacks on small islands as well as those on land masses against larger enemy forces.

Saipan

The Saipan assault was typical of numerous operations in the Pacific during World War II. The mission of the attack was to secure control of sea communications through the Central Pacific and to establish sea and air bases for the support of future operations. The Saipan assault was the initial phase of three successive operations which secured the entire Marianas group of islands which lie within very heavy bombardment range of the Japanese home islands. It was planned and executed by the Fifth Marine Amphibious Corps, consisting of two Marine divisions and an attached Army infantry division.

A base development phase followed the assault. It was executed by an Army garrison force from the Hawaiian islands commencing shortly after the initial assault.

The plan called for a ship-to-shore operation with the landing forces combat loaded on APAs, AKAs, and LSTs in the assault convoy. Initial supplies to accompany this force are shown graphically on Chart A.

Ships for maintenance, follow-up, and resupply were block-loaded on the West Coast of the United States. Consecutive convoys sailed in time to reach the area of the Marshall Islands by D−1, D+8, and D+18, and were to be available on call thereafter to the Landing Force Commander. Supplies carried included supply for 115,000 men for thirty days, loaded in balanced blocks for 3,000 men each. Automatic supply was planned to continue to D+120. The feature of particular interest in this plan was that although the assault force was mounted in Hawaii,

The development of amphibious operations in World War II presented many new problems of supply build-up which varied with the theater, type of operation, size of the force, the mission, and future plans

their resupply was to be shipped directly from the United States via the Marshall Islands. Shipment from the United States was necessary, because the facilities available in Hawaii were not sufficient to support the Saipan attack and at the same time mount-out the Titian and Guam phases of the Marianas operation.

Sicily

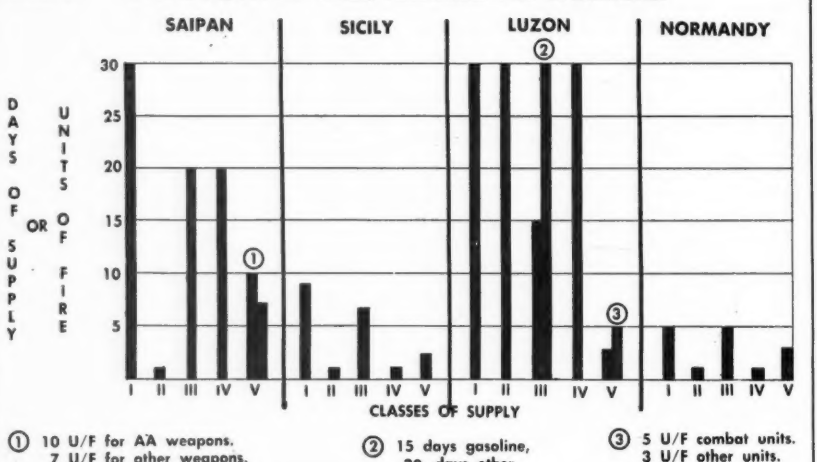
The attack on the island of Sicily offers a good comparison to that on Saipan because of the similarity of the missions and the fact that the Sicilian operation was typical of those conducted in the European Theater. (In this discussion only the American portion of the forces involved are considered.)

The purpose of the attack on Sicily was to secure sea lanes of communication in the Mediterranean and to establish air bases for future operations. The purpose of the attack differed little from that of the Saipan operation but the supply plan presented a considerably different picture.

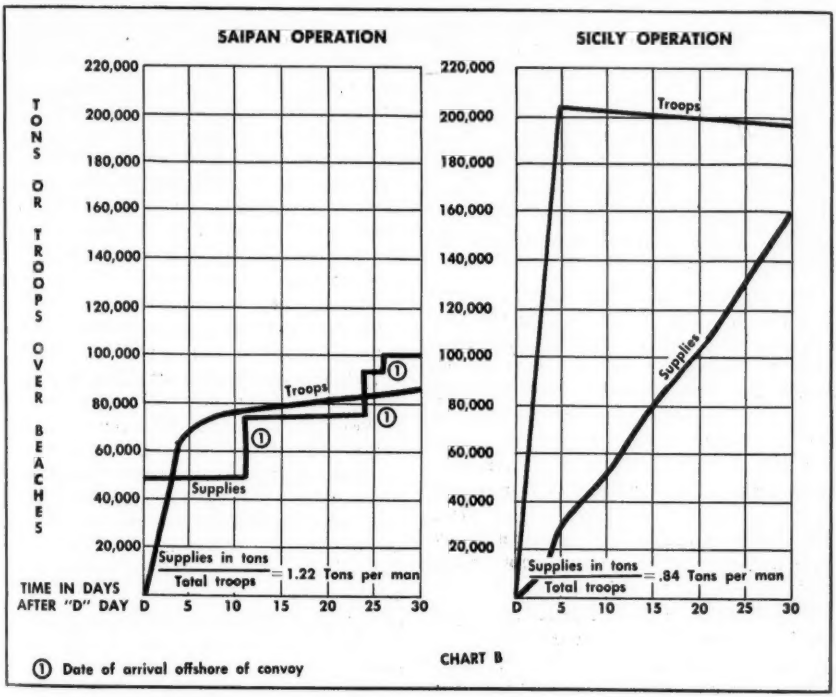
The attack was mounted out from bases all along the African Coast including Oran, Algiers, Bone, Bizerte and Tunis, with some elements direct from the United States staging through Oran. Assault elements were combat loaded on all the usual types of amphibious craft and were accompanied by initial supplies shown graphically on Chart A.

The resupply plan provided that bases in North Africa would be stocked with adequate reserve supplies. Supplies would then be delivered from the depots initially to the beachheads and later to Palermo. In the preliminary planning it was estimated that Palermo, on the north coast of Sicily, would be captured by about D+14. At that time direct supply from the United States was to be initiated. It was further planned to initiate direct supply by water to supply points along the north coast of Sicily concurrent with, or shortly after, the capture of Palermo. In the actual operation, Palermo fell on D+17,

CHART A INITIAL SUPPLY BY CLASS, PRESCRIBED FOR OPERATIONS.



and supply points were established successively at Termini Immerse, San Stefano, Brolo, and Barcellona, in rear of the tactical forces, as they advanced eastward along the north coast. Artillery and mortar ammunition was delivered to these supply points from the initial beachheads on the southern coast of Sicily by coasters loads of supplies to Sicilian beaches, the turnaround time for these craft being about five days. During the same period, supplies were also delivered by nineteen coasters, four troopships, one tanker, and twenty-four storeships. From these figures it can be seen that the depots in North Africa functioned almost as a base section



and LSTs. Other supplies, such as rations, fuel and lubricants, came direct from North Africa or out of Palermo by ship. This increased mobility was also utilized to advantage by tactical forces in the forward displacement of some of their heavy artillery units.

During the period of active operations this shuttling system delivered some 400 LST loads, 132 LCT loads, and 174 LCI throughout the Sicilian operation, the only difference being that supplies were delivered, in some cases, directly to tactical units by sea rather than by land lines of communication. It is obvious that this factor in the planning would tend to minimize the necessity for the build-up of large stocks of supplies in the forward areas. At the same time, it materially increased the mobility of the tactical forces

by offering extremely flexible lines of communication.

Comparison

Chart B gives a graphic presentation of the comparison between the two island operations. It shows the troops and tonnages ashore throughout the first thirty days of operations. An arbitrary assumption has been made, in each case, that thirty days represents the purely amphibious phases of the operation and that thereafter the supply picture was more nearly normal. Chart A indicates the prescribed initial supplies by class, expressed in days of supply or units of fire for each operation. Where orders stated "minimum necessary" this has been represented by one day of supply. Initial supplies are included in the total tonnages covered by the graph.

Comparison of the initial supplies shows that the quantities prescribed for the Saipan operation were much greater than those for Sicily. It is believed that the reason for this disparity rises directly from the type of operation. Saipan, on the one hand, was a ship-to-shore type and the distance from supply bases dictated larger initial quantities than would be necessary for a shore-to-shore type, such as Sicily where bases were relatively close and where the lines of supply could be presumed secure.

It is logical to expect that the troop build-up for each of these operations would be similar, and this is found to be true, with a rapid troop build-up to near the maximum strength, and leveling off after this strength had been reached. The most probable explanation of this is that a reasonably predictable course for the operation could be foreseen, and that enemy counteraction was likely to be more prompt, but not as enduring as might be the case over larger land masses. Such minor differences as did exist between the two operations seem to have arisen again as a result of the type of operation contemplated. For instance, the shore-to-shore operation against Sicily employed the entire force in the first five days, which follows closely not only the type of operation but the characteristics of the American force commander, the late General George S. Patton.

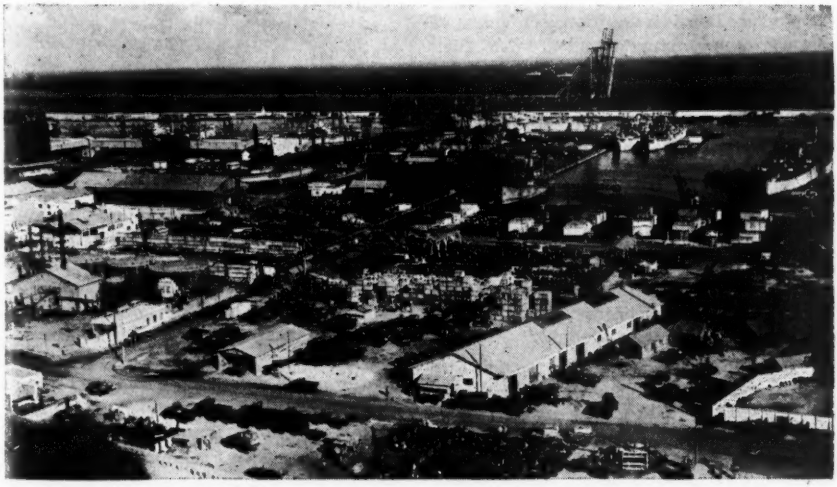
The ratio of the total force landed during the operational period to the total tonnage of supplies also offers some conclusions. For Saipan this ratio was 1.22 tons per man, while for Sicily it amounted to .84 tons per man, both over the same time period. This probably results from the differences in length and security of supply lines. In the case of Sicily, due to the preponderance of air and sea power held by the Allies, the planner could be reasonably certain that because of the relative security of the supply lines, as well as their short length, it would be relatively easy to maintain the Sicilian forces. Consequently, it was neither necessary nor wise to build up large reserves of supplies during the amphibious phases which might later limit tactical operations. However, for Saipan, this degree of assurance did not exist, and the likelihood of heavy shipping and battle losses was pronounced. The obvious answer, therefore, was to build up reserves on Saipan as rapidly as possible and cut down the supply flow after the island was secure. A second factor, which can not be overlooked, is the fact that the amount of base development necessary on Saipan was much more extensive than that required on Sicily where much of the development had already been done for the Allies by the Axis powers.

Luzon

The mission of the attack on the island of Luzon was to destroy major elements of the Japanese forces, to clear the island and to secure the port of Manila as a major base for future operations against the Japanese homeland.

Initial operations were carried out by

Ship-to-shore supply build-up was employed in the Pacific, as shown above, where cargo was being unloaded from LCMs and LCVPs on Blue Beach No. 1, Saipan. The invasion of Sicily involved shore-to-shore supply from bases such as the Ordnance Port, Oran, Algeria, below.—Army Signal Corps photos.



the Sixth United States Army with an assault force of five infantry divisions, one combat team, one armored group, and one ranger battalion. Following the assault phase, the Sixth Army was reinforced by four additional infantry divisions and two combat teams. The assault force landed on D-day comprised about 63,000 troops. By D+30 this force had reached a strength of more than 203,000. The entire force was supported over the beaches for the first thirty days.

Initial supplies for this force are shown on Chart A.

Resupply for the Luzon operation was planned on a much larger scale than that for the two operations already considered. A total of seventy-one ships were to be used as resupply vessels, divided into types as follows:

Standard supply, block-loaded for ground forces	22 ships
Standard supply, block-loaded for Air Forces	4 ships
Ammunition	13 ships
Tankers	5 ships
Supplementary supply	27 ships

These ships were set up for delivery on a time schedule. In addition, a number of reserve supply ships, loaded with fuel, oil, and ammunition for air and ground forces, were to be on call. Each of these standard block-loaded ships carried thirty days supply for 20,000 troops. These figures show that the tonnage of supplies planned for the Luzon operation was much greater in proportion to the size of the forces employed than that for the Saipan operation. This difference in tonnage can be accounted for by the fact that a much longer, and therefore less predictable operation, was being considered.

Normandy

The mission of the assault in Normandy was to secure a beachhead on the continent of Europe, capture the port of Cherbourg, and build up the supplies and bases necessary for the launching of the final attack to destroy the German Army. The initial assault was conducted by the First American Army in cooperation with a British Army. (This study considers only the American forces involved.)

Initial supply for this force is shown on Chart A.

Resupply for the force was to be provided by the Advance Section, Communications Zone, attached to First Army initially. A near shore base for the operation was established in the British Isles, in a fashion similar to that in North Africa for the Sicilian operation. From the island base it was feasible to support the combat forces across the Channel, thus reducing the quantities of reserves necessary in order to carry on the fighting. This method also had the effect of eliminating much of the detailed scheduling of ships found necessary in the Pacific operations. At the same time, the supply system was more flexible. The supply problem and the functioning of the supply system were no less difficult, but the quantities of reserves could be reduced during the early periods of the operation in order to increase the number of tactical troops within the limits of shipping available.

Comparison

Chart C shows the Luzon and Normandy operations in the same manner as that used for Sicily and Saipan. Comparison of the curves shows that in the Normandy operation the delivery of supplies, as compared to the troop build-up, was more gradual than on Luzon. Also, initial supplies were much less for Normandy than for Luzon, and by the end of the same period a larger proportional tonnage had been delivered in Luzon than in Normandy. On the other hand, the number of troops delivered across the beaches is approximately as three is to one in favor of Normandy. This comparison indicates sharply how the supply picture of the op-

erations differs and seems to verify conclusions reached in earlier analysis.

Conclusions

Considering that the four operations discussed are typical of amphibious operations during World War II, we can draw some conclusions as to amphibious operations in general from the supply point of view. It appears that the most essential considerations are the purpose of the operation, the troop build-up desired, the geographical location and nature of the area, and the type of operation which will have to be conducted.

The purpose of any operation will have a pronounced effect on the supply plan. Usually an attack on a large island mass, as illustrated by Luzon, will require a much larger supply build-up, in proportion, than the attack on a small island. If, however, the small island is to be used as a base for future operations, then it may turn out that ultimately the supply tonnage delivered will be greater in proportion to the troops employed. The base development phase, however, would normally follow the amphibious phase, as in the case of Saipan.

The troop build-up rate, and the num-

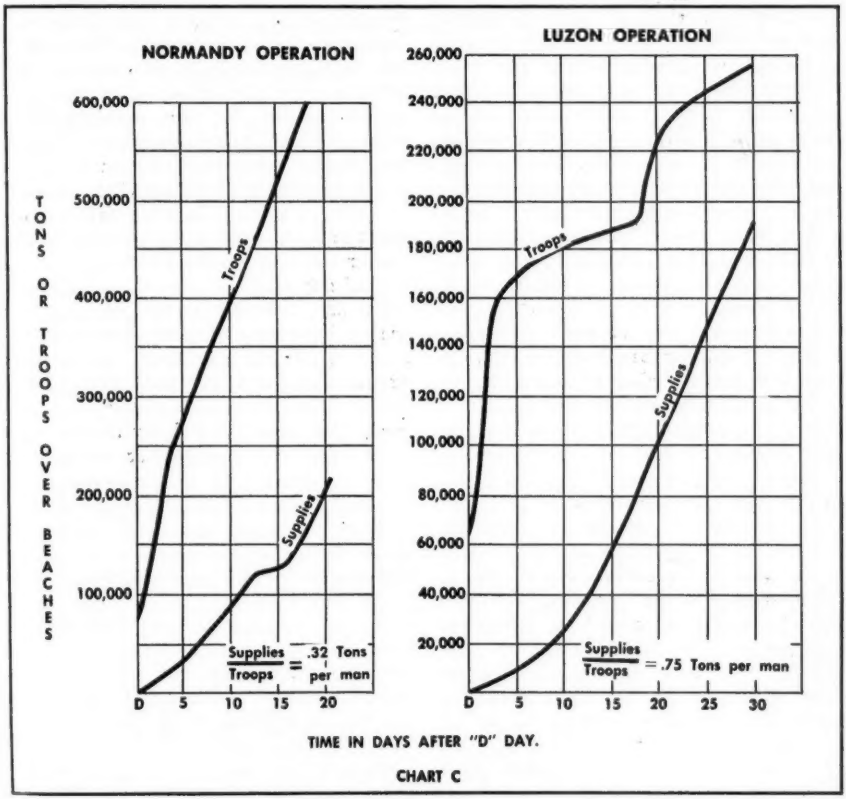


CHART C

ber of troops employed, will obviously affect the tonnage of all supplies. If, however, the operation is to be a brief one, such as at Makin or Tarawa, the amphibious phases may be concluded so quickly that the amounts of supply actually delivered over beaches under combat conditions may be small. The same condition may also be found in such a case as Normandy where the supply build-up was quite gradual, while the troop build-up was very rapid, indicating that the supply build-up phase was subordinated initially to the troop build-up phase. All four of the operations, however, definitely indicate that in the normal operation the two curves roughly parallel each other.

The geographical location and nature of the area under attack affects every amphibious operation to a major extent. This is true not only as to tactical considerations, but also logistical considerations. In fact, most amphibious operations have been initially planned to seize a port or harbor of sufficient capacity to support the ground action. This practice has been used for centuries and needs no elaboration.

Graphic comparisons of the supply picture in the operations previously considered indicate that one of the most important factors affecting supply build-up is the type of operation. Nearly all of the operations in the European area were shore-to-shore type operations. When the Axis forces in North Africa had been destroyed, two land masses, the British Isles on the north and Africa on the south, were available as bases for future operations. By the summer of 1944, both of these areas had been stocked with staggering quantities of all types of supplies, while their ports teemed with ships and landing craft. Under these conditions supply flow could be maintained without planning for large initial reserves on the beachhead and a deliberate build-up of supply could be carried on in conjunction with tactical operations.

The conditions existing at about the same time in the Pacific, however, presented a different supply picture. The Japanese Navy still constituted a dangerous hazard to supply convoys in that area, and long-range bombardment had not yet reduced the Japanese Air Force to impotence as demonstrated at Okinawa. Supply lines were extremely long, bases were small, and in many cases lacked not only space but facilities with which to handle the huge amounts of supplies involved. Shipping was quite adequate, but the turn-around time in most cases exceeded thirty days. Under conditions such as these, it was almost mandatory to plan for large initial reserves with the assault forces, and in addition, to provide for a rapid build-up in order to meet unforeseen contingencies or temporary breakdowns in the pipeline of supply.

Finally, it might be well to consider the implications of this analysis with respect to future operations. Since it is probable that a larger proportion of our future armies will be airborne, is it not likely that these forces may also be supplied by air for long periods, or possibly even launched into and maintained in combat by air supply? The supply characteristics of such operations would be quite similar to those of shore-to-shore operations, because of the speed of aircraft and consequent short turnaround time, the extreme flexibility of employment, and the probable small cargo capacity (as compared to shipping). Although extensive aerial supply might entail the construction of an intricate near-shore air base network it should, at the same time, offer many advantages. Among these might be a material reduction in the required levels of supply overseas, a simplification of our current communications zone concept, less service support personnel, decreased "pipeline" quantities, and a marked reduction in order and shipping time. And last, but most important, it would undoubtedly make the field forces far more mobile than in the past.

New Names for Old Ideas —Intelligence Planning

Colonel Thomas F. Van Natta, III, *Cavalry*
Instructor, Command and General Staff College

THE question of labelling our military operations and processes is always a perplexing one. Our terminology must be accurate enough to avoid misunderstanding, varied enough to cover the field, and simple enough to avoid confusion. Shall we give a certain operation or process a long, definitive name to insure that whenever the name is used it can refer only to this one particular idea, or shall we use a simple term that has a general meaning, but one that everyone will understand? The choice is not easy, and what is logical today may be illogical tomorrow.

The particular case under consideration here is the expression "intelligence plan," which, until very recently, did not have a meaning parallel to the "operation plan," "administrative plan" or "logistics plan." The situation was illogical, but the reason for it is understandable.

Combat intelligence, as an orderly, organized operation, did not really come into being in our Army until World War I, and the analysis and definition of this operation or process was not completed until several years later, when the campaigns and major actions had been studied. Out of this analysis came the term "intelligence plan," which referred to the particular plan drawn up by the intelligence officer for obtaining information necessary to tactical operations. At this time it seemed perfectly logical to call this the "intelligence plan," for it covered everything that a combat intelligence officer was responsible for in those days.

Since then, however, it has become apparent that the term is wrongly used. It is not *the* intelligence plan, because it does not by any means represent all the planning that today's intelligence officer must carry out. To give one simple example, the G-2 must plan for the proper handling of any prisoners, documents, or matériel that may be captured from the enemy, and there is no place in the old intelligence plan that covers this.

During World War II the old meaning of "intelligence plan" was retained, but, to cover the wider field, "intelligence plan" was also used to refer to all intelligence planning. The result, of course, was confusion.

The Army Ground Forces Intelligence Conference, held at Fort Riley in June 1947, considered the matter and recommended more exact terminology: "specific intelligence plan" for the old "intelligence plan" that dealt only with the collection

Changes in military terminology reflect the continuous effort toward accuracy and simplicity. The present "Intelligence Plan," discussed here, parallels the operations, logistics, and administrative plans

of information, and "general intelligence plan" for the complete plan for all pertinent intelligence matters. These new terms cleared the atmosphere of confusion, but they still had three disadvantages: the titles were long, they still were not definitive (anything can be "specific"), and they still did not match the labels used for corresponding activity by the other staff sections.

Collection Plan and Intelligence Plan

The matter was studied at the Army service schools, and eventually the present names were hit upon: "collection plan" and "intelligence plan."

The term "collection plan" is to be used in these schools in place of the old "intelligence plan," when it refers to that plan prepared by the intelligence officer which determines the indications that will answer the essential elements of information (EEI), and will further determine which collection agencies and sources can best be exploited to obtain these indications. In other words, a "collection plan" is a plan to collect the information necessary to satisfy a particular set of EEI. The collection plan is well known to all combat intelligence officers and is probably familiar to anyone who has attended a branch school advanced course.

The "intelligence plan," however, covers a phase of intelligence operations that up to now has never been specifically labelled. Every combat intelligence officer has formulated such a plan, usually not once but several times, although it may have been called by other names. Briefly, this intelligence plan reflects all the work and thought that will eventually be expressed in the intelligence annex to an operations order and a little more. In this sense, the term "intelligence plan" is an exact parallel of the other "plans"—"operations plan," "logistics plan," "administrative plan" and so on.

There is no "official" definition of the intelligence plan available as yet, but the idea is so logical, and the need for this terminology so obvious, that it can be assumed almost with certainty that the idea will be definitely adopted. The Command and General Staff College is making this assumption and is writing this concept into its revised manuals and current teaching.

Details of Intelligence Plan

The AGF Conference described this plan as "the broad intelligence plan prepared by the Intelligence Officer during the planning phase preliminary to the operations phase." This does not tell much of the detailed steps or items that must be considered in this planning, so to analyze its workings, it is better to leave the definition and go back to our original comparison: the intelligence annex to an operations order. Even this cannot be a complete guide, as, for reasons that will appear later, even the annex will not provide guidance for all intelligence operations, and supplementary orders will have to be issued. In our planning, however, all aspects must be considered if we are to obtain maximum efficiency. But the annex is still the most useful starting point, so we will begin with that. (Refer to sample Intelligence Annex—Infantry Division on pages 60-61.)

Paragraph 1 is a summary of the enemy situation. This is not part of the intelligence officer's current planning, but rather the result of his previous planning. In financial terms, it is the "balance carried forward," the working capital with which we start our planning operation. This balance from the last operation will never be sufficient to finance the next operation, so our planning properly begins with an effort to increase this capital.

This brings us to Paragraph 2, the EEI. To continue our financial comparison, this is our determination of what additional capital, in the way of intelligence, is needed to finance our next operation, the one for which we are currently planning.

Paragraph 3 contains the specific orders and requests that we expect will satisfy this demand for additional information, and here, most intelligence officers will have noticed, we have come to the end of the old intelligence plan, which we now call the collection plan. In other words, our collection plan is only a part of our general planning, for the annex goes on to other considerations.

Paragraph 4 contains our instructions for handling anything we capture from the enemy: people, papers or things. Our planning in this respect must be coordinated with other staff sections, for prisoners must be guarded, sheltered and fed, and things must be moved and stored. The intelligence officer must plan, however, for the most efficient and timely intelligence exploitation of what may be captured, within the capabilities of our administrative and logistical system. And his plan must be realistic and flexible. It must estimate the largest quantities we may capture and yet it must not be so cumbersome that time is lost in obtaining information.

Paragraph 5 refers to maps and photos, and little discussion is needed here, for every combat officer knows the importance of having the right map or photo at the right time, and of being able to obtain special maps and photos with minimum delay. Other agencies produce and handle the maps and photos, but it is the intelligence officer who must plan the system that is to get each item to the people who will need it when they need it. And too soon, especially in the combat unit, is almost as bad as too late, for only so much can be carried and what is not immediately needed may be abandoned.

Paragraph 6 refers to counterintelligence, and here a complete manual could be inserted. Not only does it cover passive counterintelligence, such as camouflage and security discipline, most of which can be included in SOPs, but also active counterintelligence, such as specific instructions concerning screening of local inhabitants and detection of line-crossers or other enemy agents. Some of these orders may well involve matters of such high security classification that it would be undesirable to include them in the annex. All this the intelligence officer must consider in his planning, so as to obtain the best results.

The last paragraph, 7, on reports and distribution, also needs little discussion, except perhaps the caution that to overdo is almost as bad as to underdo. A unit that receives too many long reports has its senses deadened, and a unit that is required to make too many reports becomes careless and inaccurate.

Other Problems

This carries us through the annex, and with it we have covered the greater part of the field of our Intelligence Plan. There are other matters, however, which do not appear in the annex, but which are common problems that must be met, and hence planned for, by the intelligence officer.

These, for convenience, can be gathered under the name of "auxiliary agencies," and can be further grouped by dividing them into three general classes: those under G-2 control, those under administrative control of higher headquarters (usually Theater), but whose forward elements are under G-2 operational direction and supervision, and finally those that are normally attached and operate under other staff sections but require close coordination with G-2. For convenience in further discussion we might call these classes "controlled agencies," "directed agencies" and "coordinated agencies."

The controlled agencies include all the small teams that are usually taken right into the G-2 section, and are so much a part of the section that there is considerable opinion in favor of making them organic. They are prisoner of war interrogator teams, order of battle teams, mili-

INTELLIGENCE ANNEX—INFANTRY DIVISION

(CLASSIFICATION)

2d Infantry Division
CRAKEN, NORD
231800 Dec 19--

Annex 2 to Operation Order 10, Intelligence.

Map: POVIA, 1:50,000, NORD ISLAND.

1. SUMMARY OF ENEMY SITUATION.—See map, Annex 1 to Operation Order 10 (omitted) and Intelligence Summary 20.
   a. The Povian 13th Division is defending southerly approaches to BRELADE (590-940). Elements of all three regiments have been committed and identified in the line.
   b. *Reserves capable of intervention.*
      (1) Infantry battalion at ROZA (588-947).
      (2) Infantry division in assembly area vicinity MORAN (577-953).
      (3) Tank regiment plus infantry and artillery observed 20 miles north SETO (593-956) moving south.
2. ESSENTIAL ELEMENTS OF INFORMATION.
   a. Will the Povian 13th Division be reinforced with the infantry battalion at ROZA, the infantry division vicinity MORAN or the tank regiment plus infantry and artillery observed 20 miles north of SETO? If so, where?
   b. Will the Povian 13th Division attack? If so, where and when?
   c. What is location enemy mine fields in our zone north of the line of contact?
   d. To what extent will areas in our zone be made impassable by flooding or rain?
3. RECONNAISSANCE AND OBSERVATION MISSIONS.
   a. *Orders to subordinate units.*
      (1) 4th Infantry: Report initial enemy contact immediately. Report obstacles, natural and artificial, in zone of action and movement of enemy troops south from KOBIN (592-946); hourly reports beginning H-hour.
      (2) 5th Infantry: Report initial enemy contact immediately. Report obstacles, natural and artificial, in zone of action and movement of enemy troops south from ROZA (588-947); hourly reports beginning H-hour.
      (3) 2d Reconnaissance Company: Screen left (west) flank of division and reconnaissance roads leading to assembly position vicinity MORAN. Maintain surveillance troops this area and report immediately any movement of enemy troops into or out of this area. Otherwise, hourly situation reports beginning H-hour.
      (4) Division Artillery: Maintain surveillance of roads and trails leading into division zone and report immediately any concentrations or movements of enemy troops or artillery observed. Furnish G-2, at 0900 and 1600, an overlay indicating areas where enemy artillery is concentrated; type, caliber, and number of weapons where possible; changes indicated since last report.
      (5) 2d Engineer Combat Battalion: Determine width, current, depth, and condition of banks of the JERSEY River.
   b. *Requests to higher, adjacent, and cooperating units.*
      (1) Sixteenth Army: Army is requested to furnish daily photographic coverage of front line positions in sufficient quantity for distribution to assault platoons and field artillery battalions. Both verticals (scale 1:12,000 approximate) and low angle obliques are desired. It is further requested that army furnish photographic coverage twice daily (approximate 0900 and 1400 on troop concentrations MORAN and ROZA).
      (2) 1st Infantry Division: Request early information on movement of reserves into BRELADE.
4. MEASURES FOR HANDLING PRISONERS, CAPTURED DOCUMENTS, AND MATÉRIEL.
   a. *Prisoners of War, deserters, repatriates, inhabitants, and other persons.*
      (1) During the operation, all non-Allied personnel regardless of connection with the Povian military, will be considered prisoners of war until G-2 determines their status.

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tary intelligence interpreter teams, translator teams, photo interpreter teams, mobile weather detachments and counter-intelligence detachments. Since these units are such an intimate part of the intelligence officer's family, any orders to them are never passed through the formal process of the operation order but are handled as intraoffice matters. But the intelligence officer must plan the activities of these units just as much as he plans other matters. SOPs can be developed early in the life of a tactical unit that will guide the activities of these controlled agencies in nearly all situations, but an intelligence officer must never become complacent about his SOP, and should review it to insure its adequacy for every new situation.

The directed agencies include units which, while not available for all operations, are in such common use that the in-

(2) Captured air crew personnel will be reported immediately to G-2 for disposition.

(3) In no case will prisoners of war be evacuated from division area without specific authority of G-2.

b. Documents and captured matériel.

(1) All captured documents will be forwarded to G-2 as expeditiously as possible. Documents, maps, and charts, may be retained by lower echelons having language personnel only long enough to permit examination for information of immediate value to that echelon. Each captured document must have entered on its face:

(a) Time and place of capture.

(b) Statement that it has or has not been translated.

(c) Signature of translator. (If translated, a copy of the translation must accompany the document.)

(2) Units capturing signal equipment, particularly radar and radio equipment, will, if practical, leave it in position unmolested and inform G-2 of the location and nature immediately. Telephones and other equipment not in operating set-up will be forwarded to division signal officer as soon as possible.

(3) Captured or crashed hostile aircraft will be guarded by the unit discovering them. Notify G-2 immediately of the location. Touch nothing on the aircraft until air intelligence personnel arrive.

5. MAPS AND PHOTOGRAPHS.—Following will be furnished:

a. One map NORD 1:50,000, per officer in the division and 20 per battalion or higher headquarters.

b. Fifteen maps POVIA, 1:250,000, per battalion or higher headquarters.

c. Thirty maps BRELADE 1:25,000, to each artillery and infantry battalion.

d. One set of oblique photographs daily or 3 times weekly of front line positions, to each infantry platoon.

6. COUNTERINTELLIGENCE.

a. All enemy telephone and telegraph stations in zone of advance will be taken over by advancing unit. G-2 to be notified.

b. Regardless of friendliness, inhabitants will not be admitted to any unit bivouac or defense area unless authorized by this headquarters.

c. Censorship of mail will be conducted in accordance with existing regulations.

7. REPORTS AND DISTRIBUTION.

a. Regiments will submit unit reports as of 1800 daily to be forwarded to G-2 by 1930 daily.

b. In addition, all units will make special flash warning reports, followed by urgent messages giving available detail, on the following by the fastest means available as soon as observed:

(1) Hostile combat attacks.

(2) Tanks.

(3) Combat aviation.

(4) Paratroops.

(5) Chemical attack.

c. Unit intelligence sections will make a telephone or radio report every 3 hours giving a summary of enemy activity during the period.

d. Units making reports will always give the counted enemy dead for the period and the cumulative total dead.

BY COMMAND OF MAJ GEN SMITH

Chief of Staff

Distribution: A
OFFICIAL:
/s/ Jones
G-2

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telligence officer can usually expect to have their services. They are common enough so that SOPs can be developed for their guidance, and the same principles apply in planning for their activities as for those of the controlled agencies. The directed agencies include Army Security Agency detachments, clandestine intelligence teams, special counterintelligence teams, evasion and escape units, and psychological warfare units.

The final class, the coordinated agencies, are rarely attached to or controlled by the intelligence officer but the nature of their work requires close coordination by him. He must definitely consider them in his planning, and where he considers it advisable, he should recommend to the proper staff section any orders or instructions he considers these agencies should receive. A complete list of these agencies would be impossible to compile, as they vary with every situation and type of action. The more common ones, those that

most frequently fall within this classification, are: air warning service, public information personnel, military government teams, technical intelligence teams, field press censors, civilian press censors, base censors, prisoners of war censors, and civilian postal, telephone and telegraph censors.

Even the above may not cover all the facets of a plan which a G-2 must produce, but any extra considerations are too varied and infrequent to warrant special paragraphs. When the need arises, they can be covered in appendixes to the plan.

No fixed form for an intelligence plan, as such, has as yet been developed, nor is it certain that such a special form is advisable or necessary. In the first place, when too many forms are drawn up it eventually exhausts the patience of even the best staff officers and the result is apt to be a general ignoring of any and all forms. In the second place, as we have seen, the intelligence annex furnishes a guide that is complete in nearly every respect.

Planning

It should be noted that the sequence of the material of the annex is not a guide to the order in which intelligence planning is carried out. During any planning phase, the first action is usually an estimate, based on whatever information is immediately available, followed by a determination of the preliminary EEI that are necessary to initiate the planning. This in turn is followed by the necessary effort to obtain the information, and once this information begins to come in, new estimates are made so that planning may proceed and the EEI changed to meet current needs. Very early in the intelligence planning, too, consideration must be given to the security of the planning and preparations for the operation. These security plans will never appear in the annex, as we publish with the operation order only those security instructions that are necessary in connection with the operation.

So, likewise, does the planning for maps, photos and other intelligence aids progress through several steps, as do the plans for reports and distribution.

The production of an intelligence plan is a concurrent process, rather than a step-by-step operation, and it is also never-ending. It suffers the usual modifications and development of any plan, and is ultimately expressed as the Intelligence Annex to an Operation Order.

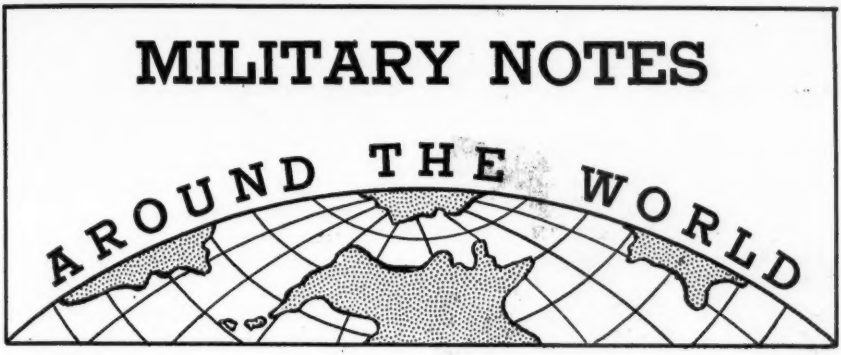
But this expression is not the end. While any operation is in progress the intelligence officer must keep his plan alive by changes to meet the changing situation, and before any operation is ended he must have begun to think of the next one.

As a final caution, it should be noted that the use of a recommended form will not automatically produce a good plan. A form only serves three purposes: it is a check against omissions, it saves time, and by patterning our thinking processes it helps to reduce misunderstandings. The effectiveness of intelligence planning will always depend on the judgment and thoroughness of the responsible intelligence officer.

In both peace and war, the security of our country is the mutual responsibility of soldier and civilian alike. Both are citizens, both animated by the same high purposes of peace among men, both products of the same American system of responsible freedoms. The Army must be prepared for war, and must fight if necessary; but like all Americans, it prefers to build for a future in which we hope wars will disappear.

Secretary of Defense James V. Forrestal

MILITARY NOTES



AUSTRALIA

Reward for Uranium

Discovery in Australia of a deposit of ore capable of producing twenty-five tons of uranium oxide will earn the finder $3,200 and an additional allowance up to $80,000 according to the richness of the find. These rewards will be paid by the Federal Government for discoveries of uranium ore by any non-official searcher. Even a small deposit too small to be of economic importance but justifying further prospecting in the neighborhood will bring a reward, the amount to be determined by the supply minister.—*Australian News Summary.*

Air Organization

The permanent Royal Australian Air Force will comprise sixteen squadrons of which nine will make up a task force, and seven a home defense force. The task force squadrons, ten aircraft to a squadron, will consist of long-range fighters, bombers, photographic reconnaissance aircraft and transports. The home defense force will have four interceptor squadrons manned by Citizen Air Force personnel, one heavy-bomber reconnaissance squadron and one target-tower squadron, with eight aircraft each, and one air-sea rescue squadron of six aircraft.—*The Aeroplane Spotter.*

Surplus War Equipment

The Australian government is negotiating with the United States government to purchase all remaining equipment and stores from American wartime bases at Manus Island and other southwest Pacific areas. Much of this equipment will be useful for development work in Australia, while the remainder can probably be used in building Australian bases, particularly at Manus Island. The government may also make an offer for a huge quantity of American equipment now stored near Sydney. This was brought to Australia by the British Navy under Lend-Lease arrangements with the United States.—*Australian Weekly Review.*

Security Measures

To guard the secrets of the guided weapons range at Woomera, South Australia, and associated work at the Salisbury explosives factory, the number of security officers in the State has been increased. Recent reports expressed fears that attempts might be made by hostile foreign powers, when actual experiments begin, to get agents into the rocket range under the guise of employees. The rocket range undertaking is now Australia's top secret defense project.—*Australian Weekly Review.*

GREECE

Mine Sweeper

The Greek Army recently demonstrated an improvised mine-sweeper typical of those they are now using on mountain roads in the nearby guerrilla country. The bar in front is magnetized and when it passes over metal it automatically stops the vehicle so that sappers can remove the mine or obstacle.—*The Illustrated London News.*

SOUTH AFRICA

Women's Corps

A women's defense corps will in future form part of the South African permanent forces. Recruiting has been opened for shorthand typists, telephonists, radar operators, dental nurses, ambulance drivers and women with other skilled occupations that proved useful in the war.

The period of service has been set at three years. Members of the corps will enlist as privates, but adjustment of rank may be made when experience and service are considered. Applicants must be between the ages of 16 and 40, be unmarried, widowed or divorced, and must have passed the junior certificate examination or its equivalent. The highest rank attainable is major.—*The New York Times.*

USSR

Military Service

Service is obligatory for all men who have reached the age of 19, or those 18 years of age who have completed middle school. (Monks and graduates of religious seminaries are exempted.)

The term of service is from two to five years, depending on the arm of the service and the rank. Privates, with the exception of the air forces, some auxiliary services and the men in the navy, serve for two years.

After their term of service, privates (rank and file) and junior commanders are considered members of the reserve of the Army or the Fleet until their fiftieth birthday. During that period the privates serve, at various times, up to eighteen months of refresher training in the army ranks.

Deferments and exemptions: If when the draftee is called, the medical commission finds him temporarily physical unfit, his draft is postponed until the next fall. The medical commission may find a draftee completely physically unfit for military service, whereupon he is excused.

Deferment may be granted on family grounds if the draftee is the sole wage earner who maintains not less than two members of his family incapable of work.

Such exemptees are listed as reserves of the second category. If, because of a change in the family situation, he loses his right of exemption, he can be called into active service.—*Soviet Union Today.*

BELGIUM

Air Force

The Belgian air force includes at the present two pursuit squadrons, one bomber squadron, and one transport squadron. One reconnaissance and one night-pursuit squadron are being organized. The pursuit squadrons are equipped with planes of the *Spitfire* type.—*Flugwehr und-Technik*, Switzerland.

GREAT BRITAIN

Basic Training

Army basic training is being reorganized to meet the manpower situation. The new system, which started in the spring of 1948, makes the best possible use of all available men. Instead of first going to primary training centers for four weeks, and then to regimental or corps training units, recruits receive all basic training at new units called Arms Basic Training Units. A.B.T.Us not only give soldiers general military training but also give preliminary specialist training in their own arms.

Time spent at A.B.T.Us varies from two weeks for an infantryman or field gunner to twenty weeks for men in the Royal Signals and Royal Electrical and Mechanical Engineers.—*The Fighting Forces.*

Parachute Training

Members of the British Territorial Army (similar to the National Guard of the United States) receive parachute instruction as a part of their training program. This picture shows Territorial Army para-

chutists of the 16th Airborne Division landing after being dropped from aircraft during a training camp at the Parachute Training School, RAF, at Upper Heyford.—*The Illustrated London News.*

Inflatable Exposure Suit

An inflatable rubber exposure suit weighing only 2 lbs. 12¼ ozs. is being tested by the RAF under service conditions. It consists of two layers of rubber and when inflated gives air insulation against cold and damp. The suit provides protection for "ditched" aircrews when exposed to long periods in the water, and increases the chances of survival when rescue is delayed.—*The Illustrated London News.*

Air Record

A test pilot flying a Vickers Supermarine *Attacker* jet fighter (MILITARY REVIEW, February 1947, p. 65) has raised the international air-speed record for a 100 kilometer (62 miles) closed course to 564.881 mph. The old record of 542.9 mph was established in a Meteor jet fighter.—*The Illustrated London News.*

GERMANY

Effects of Bombing in Germany

Study of captured German documents and the bulletin of the public health service before going into Germany indicated that there had been no major epidemics in that country despite vast destruction. At first this appeared inconceivable since the destroyed cities of Germany presented a classic culture media for the spread of contagious diseases to large sections of the population. Houses were down, water mains and sewers were ruptured in the same bomb craters, thousands of decaying bodies lay in the rubble, people lived in conditions of extreme overcrowding, and, in some cases, all the essentials of public health service were lacking.

While luck may have played its part in saving the German people from epidemics, it seems that something more than fate or divine benevolence contributed to this phenomenon. Perhaps the most important safeguard from disease was the personal habits of the Germans themselves.

The work of the *Luftschutzbund* (ARP) probably contributed greatly to the German civilians' ability to ward off contagious disease, for they made lectures on personal hygiene an important part of their training for civilians. Every civilian was required to attend a series of six lectures on first aid and personal hygiene once every three months.

Germany had a large public health service, and by virtue of this was able to give the German civilian all the protection one could expect. They directed their efforts to locating the area breeding disease, isolating it, and finding the source of infection.

Having had a high standard of health for many years, the Germans were relatively free from carriers of disease, except for diphtheria which has been occurring in epidemic form at cyclic periods for several decades. Because of the scarcity of carriers the danger of epidemics was reduced.

Hospital facilities in Germany were antiquated and barely adequate at the beginning of the war. The air war against German cities greatly exaggerated this condition through partial or complete destruction of the buildings and interruption of essential services such as power, lighting, heating, and water. Of the steps taken to mitigate these conditions the construction of elaborate bunkers was the most successful. Because of the heavy cost in material and manpower, they could be built only before the air offensive. Prior planning, therefore, is absolutely essential to continued availability of adequate hospital care when civilian populations are the object of hostile air attack. Confinement in the shelters often had a deleterious effect on the recovery of patients; but there was no report of a patient being injured or killed in a shelter in Germany, although several of these structures suffered direct hits by the heavier bombs.

The ability of a large municipal hospital to maintain its essential functions in modern aerial warfare is dependent on: (1) its proximity to strategic targets; (2) the foresight and initiative of the superintendent; (3) the degree to which it is independent of all outside help for lighting, heating, power, water, food, and medical supplies; and (4) the extent of its construction for the special protection of its patients.

There is ample evidence for the conclusion that as a result of the strategic air offensive, which was directed against all large cities and all types of transport and manufacturing plants, the nutritional demands for the continued health of the German people could not be met.—*Bulletin of the U.S. Army Medical Department.*

POLAND

Army Officer Corps

The process known in Poland as "democratization" now has been completed in the Army Officer Corps. It is a process which means simply political purification.

In the army's case democratization has resulted in rebuilding practically an entirely new officer corps. Before the war the officer corps was restricted mainly to the high born and was, according to Polish officials, as aristocratic, hidebound and tradition-fettered as any in Europe.

It was announced recently that 50 per cent of the new officer corps was made up of sons of workers and 38 per cent, sons of peasants. Only in the rarest cases did these classes provide candidates for the pre-war corps.

Among the remaining 12 per cent are some pre-war officers ranging in rank from captain to general who have made their peace with the new Polish regime. They are few, however, as the officers formed a majority of the Polish soldiers who refused to return after the war.

Along with the young men who earned their rank in battle from Moscow to Berlin, and the political officers who became a feature of the Polish Army during that time, these old-time soldiers have formed the cadres on which the new corps has been constituted. The new corps is estimated to number 20,000 in an army of fewer than 200,000.—*The New York Times.*

TURKEY

Officers Visit USA

Six officers of the Turkish Army, including three general officers and one civilian expert, visited the United States recently. The purpose was to observe modern industrial manufacturing methods with a view to modernizing the Turkish arsenal system in connection with the current Turkish Aid Program.—Department of the Army.

ITALY

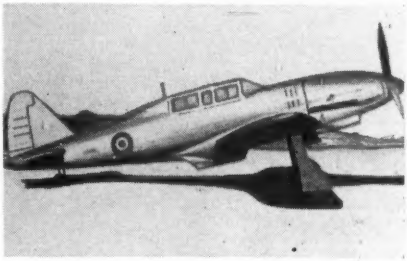
Salvage Operations

Salvage experts are working on ten Italian ships which were either scuttled or bombed and sunk in the Bay of Muggia. Under Allied Military Government Public Works program to give local employment and to furnish iron for Trieste shipyards, salvage has been undertaken to clear the bay of its war relics, some of which have been lying on their sides since 1943.

The salvage company hopes to save the hulls to use in new ships, but other parts are cut apart for re-smelting. Greatest progress has been made on the 20,000-ton *Giulio Cesare,* a liner built in 1941, scuttled in Trieste by the Italians in 1943, raised by the Germans in 1944 only to be bombed and burned by the Allies the same year.—News reports.

Training Plane

Another Italian military training plane is the Fiat G.55B which is similar in shape to the G.46 trainer, but much more powerful, with an Italian-built Daimler-Benz DB 12-cylinder engine giving 1,475 hp for take-off. The two-seat trainer was



Fiat G.55B.

the last plane designed by Fiat while Italy was occupied by the Germans, and very little progress was made with production. Maximum speed at sea-level is 314 mph.—*The Aeroplane Spotter.*

UNITED STATES

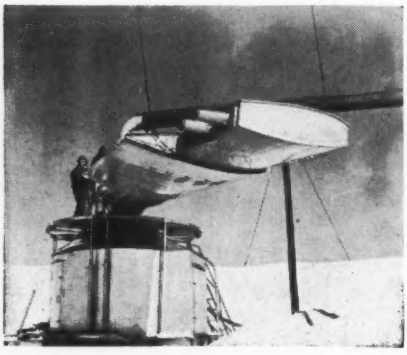
Atomic Weapons Tests

The White House has announced that tests involving three atomic weapons of improved design proved successful in all respects recently at Eniwetok Atoll in the Pacific. The Atomic Energy Commission gave the President an official report, saying the results "indicate very substantial progress."

The Commission Chairman and the four other commissioners reported orally to the President that the "present stage of the commission's tests of atomic weapons is now concluded." About 10,000 men were involved in the test, including military personnel, engineers, scientists and others.—News report.

Jet Helicopter

This photo illustrates a new type jet power plant for helicopters. The project,



operated by General Electric Company, is a part of a long-range program in the development of jet-propelled helicopters for the Air Force. The jet units, located at the tip of the helicopter blade, are tested by the propelling mechanism pictured here.—US Air Force photo.

Enlisted Efficiency Reports

Detailed efficiency reports for enlisted men, instituted for the first time in history, have been announced by the Department of the Army as another step in effecting the Career Guidance Program for enlisted personnel.

Substituted for the old adjectival notations, such as "excellent" or "good," on the service record at time of transfer, the efficiency rating will be a comprehensive report of the soldier's performance. It will be rendered by his immediate superior, in most cases a noncommissioned officer, and checked and again rated on certain items by the officer or warrant officer immediately superior to the rating person. The use of enlisted personnel as rating officials for other enlisted men is also a new departure.

The new efficiency reports will be used for the first time when the Food Service Career field is officially instituted in the near future. As other career fields are opened, they will be included in the rating system.

Efficiency reports will be used for enlisted men of all grades excepting the seventh, or lowest, pay bracket. Men in this pay grade are not considered specialists.

It is expected that the report will aid Army Personnel Management Units in selecting men for specialized schooling, promotion, assignment to responsible jobs, reclassification and separation.—Department of the Army.

Medical Consultants

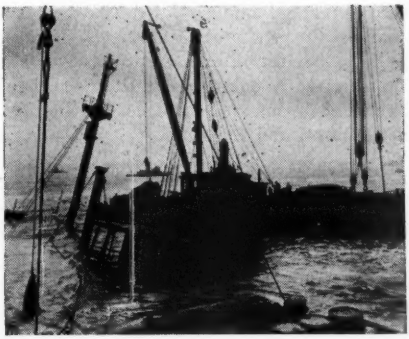
Several groups of civilian medical consultants are being utilized by the Army Medical Department in overseas areas to give patients in overseas hospitals the benefit of the finest medical talent, and to facilitate the professional training of Army doctors overseas.—Department of the Army.

Naval Salvage School

The United States Navy Salvage School was developed during World War II as the result of salvage work necessary to reclaim the burned and keeled-over French liner *Normandie*. Following this operation, the school was moved to Bayonne, New Jersey, its present location. In all, 2,500 salvage officers and salvage divers have been trained in the school. They participated in every major invasion in both the European and Pacific Theaters, clearing harbors and attack areas of sunken and stranded vessels, and salvaging and reclaiming equipment valued at more than two billion dollars.

Diver about to descend on stage.

All graduates of the school are rated as "salvage divers," qualified to make dives to depths of 150 feet. Work performed by these men falls into one of three categories: rescue tug work—operations involved in towing into port disabled vessels that have remained afloat; offshore salvage—work involved in refloating ships stranded or sunk offshore in exposed locations; harbor clearance work—done to remove obstructions which prevent or impede the free movement of ships in a port.—Department of the Navy.

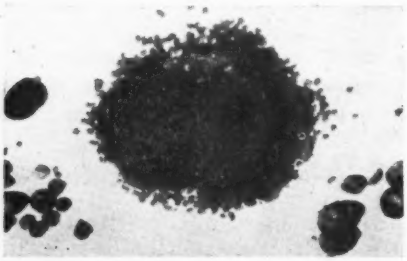


Above, removing superstructure of sunken munitions ship. Below, diver preparing for dive from barge.

Congealed Gasoline

Present conceptions of the storage, transportation, and use of petroleum products may be revolutionized if the research being conducted by the Quartermaster Corps in congealed gasoline results in perfection of this newly developed material to a point where it is practical for use in internal combustion engines, jet motors, and for fuel.

Congealed gasoline does not explode. It may be stored in open bins and shipped in ordinary freight cars like coal. It is possible to convert any grade of gasoline, kerosene, fuel oil, or any other petroleum product into a semi-solid or even solid state



Gasoline as it appears in solid form.

without changing the characteristics of the original fluid. Reconversion to the fluid state is accomplished by compression.

Tests have shown that congealed gasoline does not readily ignite. When sufficient heat is applied to cause combustion, it burns about like coal. When converted from the solid form to fluid, a small percentage of residue remains. The percentage varies with the degree of hardness to which the product has been processed, being higher with the firmer types. The research program is trying to find feasible methods for reconverting the congealed gasoline before it is fed into motors, burners, or their using devices.—*The Quartermaster Review.*

Canned Water

Water, the prime necessity of life, has only recently been canned with success, despite a long-standing need for such a product. Water is so bland that the slightest off-flavor or odor caused by a canning process is objectionable.

A need has always existed for an acceptable canned water for life-boat rations and related uses, but only during World War II did this demand become sufficiently urgent to generate the necessary research. Ultimately some standard cylindrical beer cans were used to can water for the armed forces, and a special rectangular can based on the same principles was also designed.

The next step was discovery of the fact that water rusts cans much more slowly when slightly on the alkaline side of neutrality. After wide research, a spring was finally located that yielded abundant quantities of a water of acceptable flavor and alkalinity.

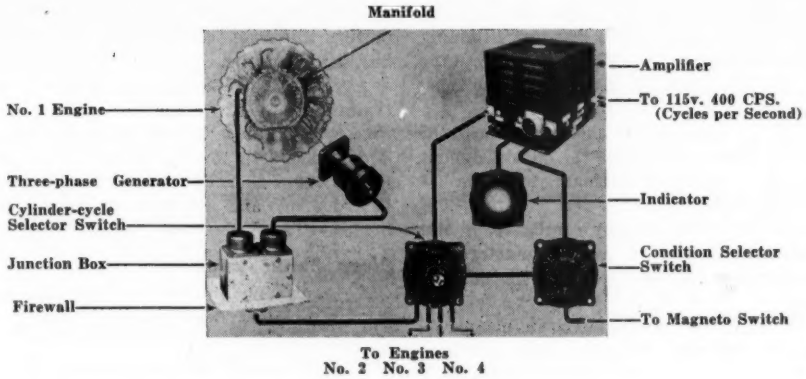
After filling and capping, the cans were pasteurized at 140 degrees Fahrenheit for 20 minutes, in order to assure absence of harmful micro-organisms. The cans were then cooled, dried, dipped in wax to protect the exterior against corrosion, marked, and packed.

The problem of expansion upon freezing was solved by underfilling. Approximately 4,000,000 cans of water were packed for the armed forces during World War II. The canned water was found to be acceptable two years after packing.—*The Technology Review.*

Vehicle Procurement

The Munitions Board has assigned to the Department of the Army the responsibility for procuring military vehicles for all the armed services. In cases involving special equipment, an exception may be made by agreement between the Department of the Army and the service requiring the equipment.—*Armed Forces.*

Engine Analyzer

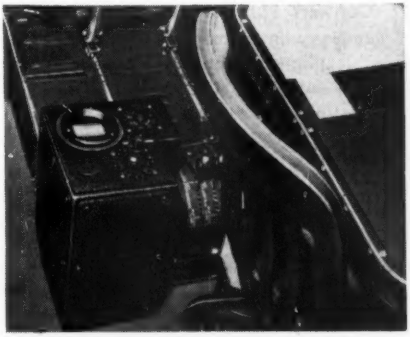


An instrument which is connected directly to plane engines to detect and record trouble.

Aircraft engine troubles can be positively located and identified during flight with a new electronic analyzer developed by the Sperry Gyroscope Company. With the new instrument, engineers forecast increased aircraft utilization, increased safety, and more efficient operating methods.

Troubles in ignition, fuel, hydraulic and electrical systems and mechanical difficulties in the engine can be identified by the analyzer at the moment they occur or when the difficulty is just beginning to develop.

The search for troubles while airplanes sit on the ground is eliminated when pilots and flight engineers can see in a cathode ray "scope" not only which engine is showing signs of malfunction but which specific part of the engine is the primary cause. The analyzer is so specific in the indication registered that it can pick out for example the improper operation of a single spark plug in the entire ignition system.—Sperry Gyroscope Company, Inc.



The analyzer installed alongside flight engineer's desk in plane.

Alaskan Training

Antiaircraft and other ground combat units from the West Coast and Hawaii participated in summer training in Alaska in conjunction with air units.—Department of the Army.

MISCELLANEOUS NOTES

Civil Defense

The Secretary of Defense has directed that an Office of Civil Defense Planning be established in the Office of the Secretary of Defense. The functions of the new agency are to be as follows:

(1) To provide for the development of detailed plans for, and the establishment of, an integrated national program of civil defense;

(2) To secure proper coordination and direction of all civil defense matters affecting the National Military Establishment;

(3) To provide an effective means of liaison between the National Military Establishment and other governmental and private agencies on questions of civil defense.—*Joint Army and Air Force Bulletin.*

To Convert Submarines

The Navy has named some of the submarines it plans to convert for special use to carry cargo and troops.

The *Barbero* will be the Navy's first undersea cargo carrier. The *Sea Lion* will be converted for transport use and the *Tigrone* will be a radar picket submarine. All three were built in 1944.—*The New York Times.*

New Atomic Power

A new source material for atomic bombs and atomic power is included in an entirely new family of fourteen radioactive isotopes, creation of which was announced at the University of California.

The new fissionable element is uranium of atomic weight 233. It was created in milligram amounts in an atomic furnace by bombarding a non-fissionable element, thorium, with neutrons. With thorium three times as plentiful in the earth's crust as uranium (only previous known source of fissionable material) the discovery thus theoretically triples the availability of nuclear fuels.—*Infantry Journal.*

Summer Training

During the recent summer, about 252,000 officers and men of the National Guard had field training.

About 50,000 officers and men received training in 1947. Of the total in the field this year, 234,000 trained with the Army and 18,000 with the Air Force. There are now 4,800 Federally recognized National Guard army and air units in the United States.—*The New York Times.*

Blood Bank System

A country-wide blood bank system big enough to meet needs in any release of atomic energy has been accepted as the goal of the American Association of Blood Banks.

It was estimated that in case of an atomic attack, ten times as much blood as normally used in any given community would be needed immediately to combat the alpha and gamma radiations which prevent the production of red blood corpuscles.

A committee on standards was set up to correlate techniques and equipment so that the products of 1,200 non-profit hospital and community blood banks throughout this country might be interchangeable in an emergency.

A committee of seven medical experts was appointed by the president of the association to wait on the surgeon generals of the Army, Navy and Public Health Service so as to correlate the 1,200 blood banks with the armed forces in case of need.—*The New York Times.*

Stratospheric Test Chamber

The army has unveiled a firing chamber used to test aircraft guns and ammunition under stratospheric conditions.

The equipment tests machine guns and light cannon under conditions similar to those encountered in combat flight at 50,000 feet altitude.—*The New York Times.*

The War of Paper

Translated and digested by the MILITARY REVIEW from an article by Georges Meyer, former director of the Press and Propaganda Section of the Ministry of War, in "L'Armée Française" (France) No. 24 March 1948.

IN the total war that Germany and the Axis waged against the Allies, one of the most dangerous weapons was the one which produced no noise or explosion, yet revealed itself as particularly destructive. It was a paper weapon, a printed sheet, often the size of only a handbill, rarely the size of a newspaper.

This weapon was the leaflet, the bogus newspaper, the abridged edition of a book forbidden by the enemy. It was also the fake box of sardines, filled with pages of information, the box of matches, the package of cigarettes, seemingly bonafide, but crammed with pamphlets and photographs.

The purpose of all this was to carry to the other side of the frontier a bit of truth to people whose judgment and whose consciences, as the result of years of intellectual slavery, had been deformed and perverted.

This clandestine and difficult underground warfare is known to very few, and but few have any conception of the efforts required for it or of the results achieved, not only during the course of the last conflict, but also during the course of World War I when it was waged with a degree of activity which, during the final months of the conflict, assumed considerable proportions.

The Germans Invent the "Papierskrieg"

It was the Germans who first used paper warfare. But in this field, as in many others, they were twice beaten. On 30 August 1914 the German aviator, Lieutenant von Hiddessen dropped three bombs on Paris. He had come to drop the first defeatist leaflets, worded as follows: "The German army is at the gates of Paris. There is only one course left—to surrender.—Lieutenant von Hiddessen."

That was the beginning of the campaign of demoralization begun by Germany. The following day, the Opera, the Stock Exchange, and the Central Market received another bundle of leaflets from the same airplane. Then they began to be dropped at Nancy, during the battle of the Grand-Couronne, in the month of October.

Along with a few bombs, a Taube airplane dropped a sheet on the city containing the following: "It was unfortunately impossible to visit you yesterday and all we can do is to send you our salutations (even though not with the desired, daily regularity), abounding with amiability—and powder.

Signed: The officers of the Third Bavarian Squadron.
Wimmer, Schneider.

P.S.—Greetings (though a bit eccentric),

to Nancy, the city which is soon to be German."

A short time afterwards the German air forces dropped on the trenches the famous leaflets: "French soldiers, surrender!"

The Germans were already powerfully equipped. They had, at Charleville, their famous "Gazette des Ardennes," edited under the direction of the supreme headquarters, and designed for civil and military propaganda. The German general headquarters made use of it for demoralizing the populations of the invaded departments, and used their planes and small balloons for sending it into the French trenches and back of the lines.

The French Reply—1914-1918

In August 1915 the Air Propaganda Service, attached to the 2d Section, was created. In order to destroy the belief which the government of the Reich had for months been inculcating in the minds of both civilians and the army that Germany had been attacked, that French planes had bombed Nuremberg and that the French had violated the neutrality of Belgium, the French services resorted to the same weapons as the Germans, multiplied them, and developed them to the point where they beat the Germans. First, it was the printing of a tiny edition of a remarkable 300 page volume, written in Switzerland by a German, Richard Grelling, and entitled, "*J'Accuse*." Reduced to a little volume of less than fifty grams, thousands of copies were printed, distributed to all the French squadrons, and parachuted into the German lines and the interior of Germany.

Then came the famous open letter of a prisoner to his German comrades written in German, which was reproduced by the first Belgian underground newspaper, "La Libre Belgique." This letter was so convincing and authentic that the German authorities made a search for the author, a Prussian school teacher from the vicinity of Berlin, belonging to the 78th Infantry Regiment.

In the style proper to a noncommissioned officer, the German prisoner expressed his astonishment at being well fed and very well treated. Then, explaining that he had run across a work entitled "*J'Accuse*" in the library, he reviewed in another succinct letter all the arguments proving German premeditation and culpability.

Together with the entire press of the *Reich*, the "Kölnische Zeitung" denounced the "deceitfulness and trickery of this pamphlet," and the Wolf agency published a communiqué which was intended to reassure the public with regard to this "gross untruth." The battle thus begun was never to end.

Twenty-eight Million Newspapers and Leaflets

By plane, by balloon, and later by shells, the German lines, trenches, occupied territories and German provinces, in the next three years, received an average of 300,000 leaflets, newspapers and pamphlets per month. For the thirty-nine months during which the service was in operation, this reached the imposing figure of twenty-eight million copies.

The inhabitants of the occupied regions were able, on many an occasion, to enjoy the pleasure of unfolding, under the very eyes of their guardians, a sheet of German appearance, but which was entirely French in inspiration and language.

Next came newspapers of every sort which carried information to German civilians and soldiers in spite of furious prohibitory decrees by the Imperial General Staff. Successively, "Die Feldpost" (The Field Mail), the "Kriegsblätter für das deutsche Volk" (War Sheets for the German People), and "Das freie deutsche Wort" (The Free German Word) conducted their anti-German campaign, and published the best articles by Frenchmen, Englishmen and German dissenters.

Their tone, at first very moderate, became more and more violent as the war wore on and German morale became more and more shaken by the efforts of the allied propaganda service. Texts and illustrations, skillfully chosen, counterfeited or invented, presented as the expression of the profound discontent of the German people, produced their full effect and, curiously, were never productive on the part of the enemy command of any systematic reprisals. One had the impression that the Germans who, under the favorable conditions attending the beginning, had taken the initiative in this war of leaflets and newspapers, had quickly become winded and that their services felt themselves incapable of replying to the reactions they had engendered.

The demoralization of the German military forces and civilians was not the only end aimed at in the war of leaflets. It was important from 1915 to 1918 and from 1940 to 1945 to bolster the morale of the Alsacians, to instruct them, and to wean them away from German political and intellectual domination. Hence, during the course of both wars, and in spite of all surveillance, Alsace was abundantly supplied with reviews, leaflets, and newspapers which penetrated even into the small villages.

A Three-Man Staff

The battle of the leaflets and the paper warfare bore an abundant harvest. This psychological war section had as a staff throughout the duration of hostilities only three men: two Alsacians and an expert on German political life and psychology.

These three men and a few secretaries formed, from 1915 to 1918, a team of nine men who, entirely alone, composed leaflets and newspapers, collected the data for and took care of the dispatch of tons of printed matter destined for the various fronts and the German civil population. A short time later there was added a reading committee.

The importance and efficacy of their efforts were shown by the testimony of the enemy. During the darkest hours, when the Marne front was giving way in July 1918, Field Marshal von Hindenburg proclaimed, in a pressing appeal which was reproduced by the entire German press: "The enemy has engaged in combat against the German mind. He plans to poison our hearts. We have not the right to consider his plan lightly. This campaign against our morale is being conducted by the enemy by different means. He not only covers our front with a rolling fire barrage; he also covers it with a rolling barrage of printed matter. He desires above all to poison the mind of the populace in the interior of the country. . . ."

And, a few months later, when the empire was tottering on its foundations, the "Gazette de Cologne" published this statement: "The thing that has done us the greatest harm, morally. . . . has been the paper warfare (*der Papierskrieg*) of the enemy, who has daily flooded us with thousands of leaflets made up and edited with extraordinary cleverness."

The most eloquent testimony is none other than "*Mein Kampf*." In one of the rare chapters that are not insulting to France, Chapter VI, we read the finest eulogy of French propaganda during the war.

Hitler here praises "the extraordinary cleverness and witty felicity of the enemy propaganda," while at the same time he deplores the marked inadequacy of that of his own country. And, particularly, he confesses his alarm at the fact that in 1917 the German people gave more credence to the French propaganda than to that of their own government, and that the convictions of the masses were already badly shaken. "The German army," said he, "learned to think as the enemy wished it to."

The lesson was not lost on Hitler. As soon as he came into power, his propaganda was organized with such fullness of means and power of action that, through the ministry controlled by Goebbels, it had its repercussions even in the most remote corners of the earth, both before and during the war.

Allied Efforts in Alsace

During World War II, the French efforts were directed with greater intensity toward Alsace. The extent of the Nazi activity in this province is well known: everything was done to Germanize the rank and file of the population.

It was necessary, therefore, to carry active, effective and sustained aid to the banks of the Rhine. Beginning early in 1943, an Allied Bulletin of Information was delivered regularly to the Alsacian cities and countryside as well as to the various regions of France and the heart of the resistance groupments, bringing concrete proof of the interest of France in arms. Copies of a great deal of other material, such as the solemn protest of the Bishop of Strassburg, the proclamation of General Giraud to the cities of Strassburg and Metz, a collection of the speeches of General de Gaulle, Rauschning's book, "*Hitler Told Me*," counterfeits of local German newspapers such as the "Mulhouser Tagblat" (Mulhouse Journal) announcing the liberation of Paris and the Soviet offensive, were disseminated by the hundreds of thousands in spite of all the efforts of the Reich police and the *Gestapo*.

Objective: Nazi Germany

Immediately after 8 November, the French services, which had emigrated into neutral territory, were enabled to coordinate their work closely with certain services of the American press which enjoyed the advantages of large financial backing and powerful means. A short time afterwards, there were circulating in Germany a steadily increasing number of camouflaged copies of the most celebrated reviews of the Nazi party.

It was "Das Neue Reich," organ of the upper-stratum of intellectual activity, that came in for first attention. Composed in impeccable language, illustrated in the purest German style, and filled with satirical articles such as "Goebbels who always tells the truth," or historical words of Hitler, the copies of this review, beginning with July 1943, enjoyed a considerable clientelle.

The Austrians were not forgotten. They needed to be kept posted with regard to the progress of the Allied offensives. The "Neues Wiener Tagblat" took over the task of keeping them informed. Remarkable in the accuracy of its imitation, it was much sought after by the Austrians—and the *Gestapo*.

But there was still better work to be done. Of all the reviews published in the *Reich*, those with the greatest number of readers were those of the Nazis party: the "Völkischer Beobachter," Goebbels' personal organ; "Das Schwarze Korps," official organ of the SS; "Front und Heimat," the army journal.

The French, aided by the Americans, very accommodatingly finished out this collection of reviews, placing the deepest-dyed Hitlerians in possession of a substantial supplement filled with information.

The German press, with one voice, sounded its protest against these efforts, whose publications enjoyed so wide a circulation that many prisoners had copies in their possession at the time of their capture. It was thus that it was possible to publish in "Patrie," the journal of the French army, many specimens of these clandestine newspapers and drawings and poems which were indicative of the moral state of certain German troops the day after the crossing of the Rhine by the Allied forces. These leaflets, in the baggage of the prisoners, were intermingled

with the bogus newspapers of the allied psychological warfare services.

* * * * *

The Problem of Delivery

But, all this effort against the *Führer* and his regime would have been of little use if the transmission and delivery of all this printed matter to the heart of Germany, to the fronts, and to the cities and the rural areas had not been insured. It was a complicated and singularly delicate task, all of whose details and secrets cannot be revealed even today. Confided to the Rhine in metal floats, or to railway employees, to bribed frontier guards, to an incalculable number of Germans who were hostile to the government, newspapers and leaflets often travelled into Germany in the mail sacks of the *Reich* and in the official envelopes of German diplomatic and consular representatives in the very country in which they were printed, until the day when the liberation of France again permitted utilization of the Allied planes and artillery shells as during the last months of the preceding war.

The Value of Paper Warfare

A formidable weapon of warfare during the course of two World Wars, propaganda through the medium of paper produced effects of a value comparable to that of the most deadly weapons. But such efforts must be directed with a keen sense of reality, exceptional prudence, and audacity. Its effects cannot attain their maximum unless vision is farsighted and broad, and unless the weapon is adapted continually to the fundamental needs of the psychological state of the enemy. Words may sometimes be as explosive as bombs and some campaigns of demoralization possess the value, in a certain sense, of an armored attack. All the belligerents recognized this.

The aim of the French propaganda service during both World Wars was simple: to attempt by means of concrete, sincere information to enlighten the various forces with regard to the true motives of those responsible for the war, and with regard to the evolution of the political and international military situations.

To be effective, propaganda must emphasize political and social matters more than military events. This was made evident during the course of the last war. Writers of propaganda at first emphasized past and anticipated military successes. French writers made the same error. But they quickly saw that this sort of propaganda produced no results when employed against armies or peoples whose convictions were solidly rooted and who had faith in their strength. Even when Allied successes were of a major order as Verdun, the Somme, and the first phase of the Normandy landing, the Germans could not be shaken, as proved by questioning prisoners and the ironical replies in the German press. It was only at the moment of the general retreat, from August to October 1918, and similarly in 1944, after the precipitate evacuation of France, that the leaflets exposing the military situation began to have effect. This was because the enemy was able to perceive his defeat.

On the other hand, during the course of the two wars, as the result of a striking similarity in the psychological situation, the propaganda service found that the only matter on which its action could be effectively based was that of the responsibility for the war. In 1914 and in 1939, France found herself faced by a nation which was convinced of its invincibility but not entirely of that of its leaders. That was the weak spot in their morale, more pronounced in 1914, moreover, than in 1939, which had to be exploited, and that was the task to which the French propaganda service tirelessly bent its energies.

* * * * *

It is clear, in the light of the experience

of these two wars, that the organization of a propaganda service destined to influence the morale of the adversary, necessitates the selection in time of peace of tried and tested chiefs and properly informed personnel. It also requires the establishment of liaison and the preparation and storage of a great deal of material: planes, small balloons, special shells, stocks of paper *manufactured by the enemy*, etc.

The Politico-Strategic Problem of Korea

Digested by the MILITARY REVIEW from an article by William Courtenay in the "Journal of the Royal United Service Institution" (Great Britain) February 1948.

IT was agreed at the Yalta Conference that at the close of the war with Japan, all Japanese forces north of the 38th parallel of latitude should surrender to the Russians; this included forces in northern Korea. Those south of this parallel were to surrender to the Americans. It was never expected that this agreement would lead to the country being divided by an "Eastern Iron Curtain," yet that is what has occurred.

Originally there were some ten million Koreans in the Russian zone; but up to three million fled south into the American zone. This brought the population up to twenty millions in that area. Refugee camps had to be set up; a housing problem arose which in Seoul, the capital, with 200,000 refugees, is acute. The Russians have now banned such movements and imposed the death penalty for anyone caught crossing the parallel.

The bulk of the heavy industries lie in the Russian zone, which though larger geographically than the American zone has less fertile areas and so holds a smaller population. Coal, iron, and all the sources of the hydro-electric power which feed the railways and which supply electric current to all Korea, lie in the Russian zone.

In the south are the agricultural areas and the rice belt. The American commander in Korea, whose headquarters are at Seoul, was from the first given authority to make decisions on the spot in the interests of a United Korea; but the Russian General on the other side of the parallel has to refer the most minute items to Moscow.

Unfortunately, all suggestions for the exchange of the crops of the south—badly required in the north, for the coal of the north—equally acutely required for the railways in Korea and in Japan, have been turned down.

The Russians allow mail from persons in the American zone to travel by the solitary rail link to relatives in the north and vice-versa. They do not permit any cooperation beyond this concession. They even control the amount of electric light which the American commander may consume at his headquarters or his house: a given number of kilowatts per week are allotted to the American zone; the Americans must themselves ration it and pull out the switch when loads exceed the ration, otherwise the Russians would pull out the master switch.

In the north a trained army of Korean Communists has been formed and armed. It is thought that they could sweep into southern Korea and take possession of it if they wished. The rise of this Russian trained leftist army has brought its inevitable counter-part—the rise of rightist forces in the south. The latter are largely

The first American occupation troops of the 17th Infantry, 7th Division, above, coming ashore at Jensin, south Korea, on 8 September 1945. At the same time, Soviet troops were moving into north Korea. Below, Russian soldiers marching north along a road from Song-Do.—US Army Signal Corps photos.

of Fascist complex, and there is not much to choose between their ideologies! The forces in the south are, however, unarmed and only united on two matters—hatred of the Communists and a demand for an early American withdrawal. On all other matters they are hopelessly divided. Chief spokeman among them is Singman Rhee—an aged Korean patriot who has lived in America for many years. He returned to Korea last year; is building a house with guards round it at Seoul; and is pleading with the Americans to hold a general election* prior to the work of the United Nations Commission. His plea is that the Commission should consult the chosen representatives of the people—meaning himself as leader. As arranged at present, they will consult certain nominated and appointed representatives as well as Singman Rhee and other political pundits. He argued his case most smoothly and ably when I spent an evening with him at his new home at Seoul in December. It is the Americans' firm view, however, that any elections will be rigged by Singman Rhee and other rightists to exclude all but their own followers from voting, or they will simply draw up a list of their own candidates and persuade the peasantry that these are really the elected representatives.

Thus the issue may degenerate into civil war after the United Nations Commission holds its elections. There is another problem: unless United Nations—which means American troops—protect the ballot boxes and assure secrecy of the election, there will be intimidation and the election will be rigged. But if they do, the parties of the left may refuse to vote, alleging that it is the Americans who are rigging the elections in favor of the right. This would give the Communist party in the south—at present a force which has gone underground—excuse for trying to seize power and for inviting in their colleagues from the north.

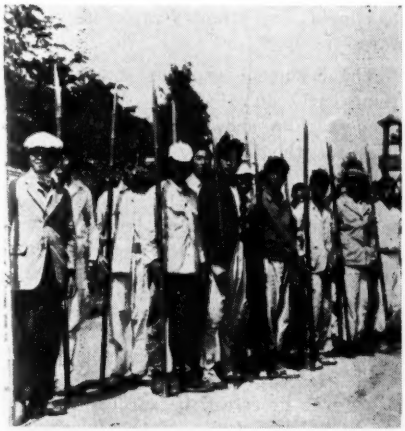
To cope with this difficult situation, the Americans have two under-strength divisions in Korea. At the 38th parallel, which runs across the neck of 270 miles of territory between the Yellow Sea and the Sea of Japan, American and Russian outposts face each other. The parallel is easily reached from Seoul by a good road which staff cars may traverse, covering the forty miles in about one and one-half hours. There is no continuous line of barbed wire or other defenses. There are a series of outposts and the parallel has been delineated arbitrarily, often cutting a farm off from its house so that the occupants must leave the Russian zone to farm in the American zone or vice-versa. Fifty yards away across "no man's land" in arid, hilly country sit the Russians with gun emplacements and artillery in position facing the American lines. No one dare stray across without certainty of arrest; of being grilled; and of being returned after a few days. Every two hours telephones ring all along the American outposts, checking the safety of the garrisons and assuring that communications have not been cut.

It is unlikely that the Russians will permit the United Nations Commission to hold elections in the Northern Zone; but they may hold them themselves, allowing only Communist candidates and returning a Communist majority. Should the majority in the south vote Communist, we may be presented with a problem of uniting the two zones under a Communist Government—remotely controlled from Manchuria. The Americans, therefore, are faced with the alternatives of withdrawing before the situation deteriorates, or of finding themselves in the midst of a civil war with inadequate forces to keep the peace.

But whether withdrawal takes place now or later, elections will have another effect. Whoever controls the air fields of

* The election in south Korea was held in May, 1948.

The first free election in Korean history was held in the American zone of south Korea in May. Above, a 31st Infantry outpost on the 38th parallel, on election day. Lower left, Korean citizens armed with home-made bamboo spears for protection against guerrillas. Lower right, two Koreans cast their ballots.—US Army Signal Corps photos.



Manchuria and of Korea will have a certain degree of strategic control of Japan. From the large number of air fields on the mainland much air power could be deployed against the islands of Japan where the numbers of air fields are limited. For this reason America is placing Okinawa, 360 miles south of Japan, in a strong state of defense. Up to thirty air fields were laid out there between May and August 1945, ready for use for the invasion of Kyushu—the southern island of Japan. From the combined air fields of Okinawa and Japan, America would be able to muster sufficient air strength to counter any attempt on the part of another power to deploy great air power in Manchuria and Korea. Nevertheless, if Korea fell into unfriendly hands, American forces in Japan would to some extent be menaced, and withdrawal from Korea will probably mean that the Communist army of the north, aided by Communists in the south will take possession of the whole country.

German Air Support

Digested by the MILITARY REVIEW from an article in "The Aeroplane" (Great Britain) 26 December 1947.

A captured German document relating to the employment of elements of the strategic air force in direct support of the Army has recently been released. The document is part of the work of the German Air Historical Branch and is dated 24 December 1943.

It begins by stating that the primary task of the strategic air force, the conduct of offensive warfare against the air forces, armament industry, lines of communication and other targets of economic importance, was so rapid in the 1939 Polish campaign that the *Luftwaffe* was able to give direct support to the Army. In France, Norway and the Balkans, close-support attacks on targets indicated by the Army were used, although the strategic warfare had not been so satisfactory. The Army could, however, have carried on without the *Luftwaffe*. The problem of how far direct air support was absolutely necessary had not been proved by the beginning of the Russian campaign, which therefore began with strategic bombing against the Soviet Air Force, the air fields in enemy use, attacks on Moscow and raids on enemy aircraft production centers. The demands of the Army were also met so far as was practicable.

The Russian counteroffensive in the winter of 1941-42 altered the position and all available forces had to be used for defense. Bomber units were employed against concentrations of Russian troops, salients and tank and gun emplacements. For these tasks the *Nahkampfuhrer*, later called the *Fliegerdivisionen*, were created and subordinated to them were the few available ground-attack and dive-bomber formations, together with an increasing number of bomber *Geschwader*, which had to support the infantry in defensive warfare.

The document explains that the creation, early in 1942, of the *Luftwaffe Feldeinheiten* showed the need for support for the infantry and that without these Air Force field units the situation in the east could hardly have been mastered. Both offensive and defensive operations in 1942 proved the need for extensive direct support of the Army by bomber formations.

Referring to the Eastern Front situation in 1943, the document says that even greater cooperation by the *Luftwaffe* was necessary because of the overwhelming superiority of the Russians in

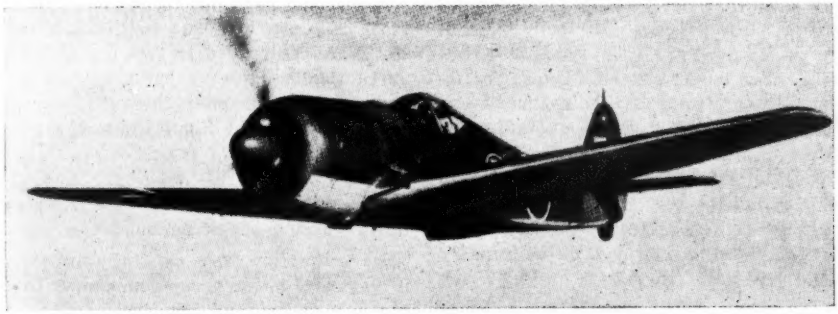
men and material. The result of this was that the whole of the strategic *Luftwaffe* was engaged in support of the Army and no forces were available for strategic warfare, meaning that no operations were possible against Russian industry and communications. The Russian advance had also decreased the distance between their front and the industrial areas under German control in Upper Silesia and Poland, and this alarmed the Germans, with its possibility of attack by the Soviet Air Force.

"These circumstances," continues the document, "demand a speedy and complete release of those formations of the strategic air force for the resumption of offensive warfare."

Germany also began at this time to contemplate with alarm the possibility of an Allied invasion attempt and considered that powerful ground attack forces would be needed during any landing operations and also against airborne troops. The bomber units then operating against England would, from the start of the invasion, have to be employed against enemy landings.

Doubt about the economy of using the *Luftwaffe* in support of the Army is expressed when the author says that knowledge and skill acquired in long and costly training in navigation and long-distance bombing is, by the very nature of ground-attack operations, completely wasted. Not only is navigation dexterity and practice lost where only visual observation is necessary, but mental aptitude is also very often diminished.

Continuing his argument, the writer says that the ground-attack pilot has to attack enemy positions, salients, infantry and tanks with bomb and cannon fire. Aircraft designed for strategic bombing are unsuited for such missions. Bombs dropped from a great height can be used successively only if a saturation attack is made and recognition of small targets is difficult from such high levels. If employed on low-level attacks, these bombers, even when protected by fighters, suffer losses disproportionate to their successes. Aircraft specially designed for this type of combat, such as the Fw-190, are necessary and can operate without fighter escort.



The Fw-190A-4, which the Germans considered specially adapted to ground attack.

The document ends with a plea for the allocation of a number of Fw-190s, originally intended as fighters, for ground attack with the object of building up a strong ground-attack force (a) to help the army, (b) to free bomber crews for their own tasks, and (c) to allow aircraft which are costly to produce and ill-suited to ground attack to be used more effectively.

Russian Tanks in Pursuit

Translated and digested by the MILITARY REVIEW from an article by Major of the Guard F. Grishkov in "Krasnaia Zverda" 8 August 1947, reprinted in "Kungl. Krigsvetenskaps-Akademiens Handlingar och Tidskrift" (Sweden) No. 9, 1947.

IN January 1944, the Russian troops, after the Leningrad blockade had been lifted and the German resistance had been broken, had taken up the pursuit of the German forces, with their main effort directed toward Kingisepp. By noon of the first day of the pursuit, one of the Russian advance formations had reached the eastern edge of the town of Tirkovitsi, and a woods south of it. There it was stopped by German fire and a counterattack. Tirkovitsi was entirely in the hands of the Germans.

In order to permit the advance formation's further progress, the command had detached a certain group of tanks, reinforced with light machine-gun and rifle troops, to which was assigned the mission of forcing its way through Tirkovitsi, pushing on and taking the town of Bol. Kartjany and holding it until the infantry could advance.

The group commander, on the basis of this order, made the decision to push ahead over the highway, force his way through Tirkovitsi and, in the vicinity of the school on the edge of Simit, have a detachment of light machine-gun troops riding the tanks attack the Germans in the rear. In this way, they could support the Russian infantry's advance, which had been halted in front of Tirkovitsi. In addition, the group commander planned to operate against Simititzi and a group of isolated houses in that neighborhood. After this movement, the tanks together with the remainder of the pursuit forces, were to attack Bol. Kartjany, and hold it until the infantry arrived. This decision of the group commander called for a Blitz-like opening of the operation. It was evident that the Germans had assumed a delaying position and were "eyeing" the rear. This situation was taken into consideration when the group commander worked out his plan.

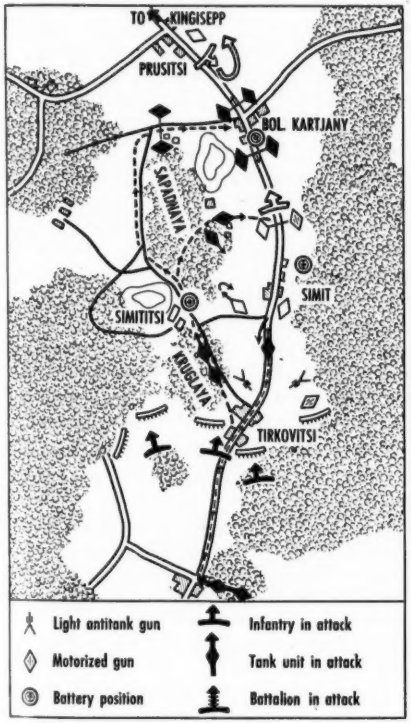
Under the protection of mortar and artillery fire, the group with a reconnaissance detachment ahead advanced at a rapid rate against Tirkovitsi. After their own infantry had assumed combat formation, it moved rapidly into the town where it was subjected to the fire of rifles, machine-guns, and two antitank guns. Patrol forces replied to this fire and silenced the two guns. Thereupon the patrols pushed on rapidly through the town in the direction of Simit where the pursuit forces were to be unloaded. When they drew near this town the German tanks opened fire. One of the Russian tanks was put out of action.

In estimating the existing situation, it was clear to the group commander that the Germans had prepared themselves for combat in the town of Simit, and on the basis of this, he decided not to permit any of the pursuit forces to dismount, but, instead, to turn off and move against Simititzi.

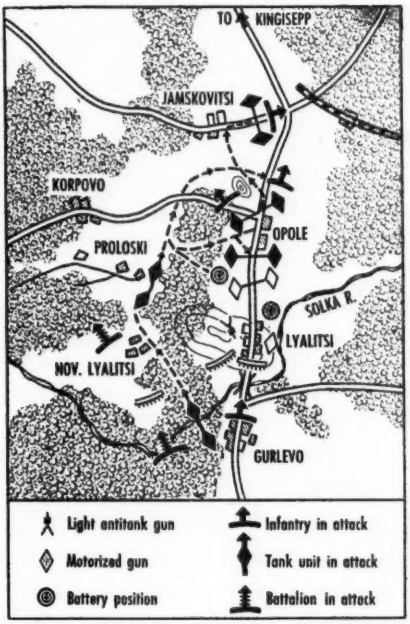
During the operation, an incident occurred which was typical of the situation which had developed. After the tanks had passed the "Kruglaya" woods, they ran onto a battery position equipped with 75-mm guns on the edge of Simititzi. In such a situation, the force wins which reacts most quickly. The group commander instantly attacked the battery which was destroyed by the fire of the tanks or ground to pieces under their treads. At this point the group commander decided to permit the pursuit troops to dismount and he now received the same mission that

he had previously received in Simit, where no action on foot had occurred.

After the pursuit troops had dismounted, the group continued on in the direction of the "Sapardnaja" woods. As it approached the latter, the reconnaissance patrol dis-



covered that enemy tanks were moving on the edge of Simit. The group commander dispatched a group of tanks to a spot near a few isolated houses on the edge of the woods from where the group opened fire on the German tanks in order to prevent them from getting to Bol. Kartjany. Firing from the halt position, the tanks began to lay down fire on the German combat vehicles, which hurriedly retreated to Simit. At this time, the group commander let the main body of his armored forces advance along the edge of the woods and they laid down their fire on the German infantry forces which they encountered. The leading tanks quickly reached a field road where they turned off at a 90 degree angle and moved rapidly toward Bol. Kartjany. They attacked the



Germans as they moved forward, took possession of the town and organized a defensive position there. After a lapse of fifteen or twenty minutes, the Germans launched a counterattack against Bol. Kartjany with infantry, tanks and assault guns from the vicinity of Simit. This attack was repulsed. Later, the Germans counterattacked from the vicinity of Pruyitsi but this attack also was unsuccessful. With the loss of one tank, the Germans drew back to their initial position.

The Russian rifle formations which had attacked pushed on through Bol. Kartjany and continued their pursuit westward. In this manner, the armored group which, in itself, was quite weak, had gained considerable ground due mainly to a skillful maneuver. The boldness with which the group acted, was, however, coupled with careful preparation.

Another example of Russian tank action in a pursuit is illustrated in the operations for Kingisepp in which the same armored group operated at night against an enemy with an unprotected flank.

After the battle for Bol. Kartjany, the Russian rifle forces continued to advance but were halted at the next defense position in the vicinity of Gurlevo. The commander of the armored group had received an order similar to that received in the previously described action. He was to insure the infantry's advance and make possible its continued pursuit.

In the preparation for the attack, the group commander reconnoitered the German position and organized cooperation with the light machine-gun covering forces, artillery, and engineers, which were to organize the crossing of the fairly shallow Solka whose banks were very marshy. Contact was particularly close with the infantry battalion commander whose battalion was to attack on the left.

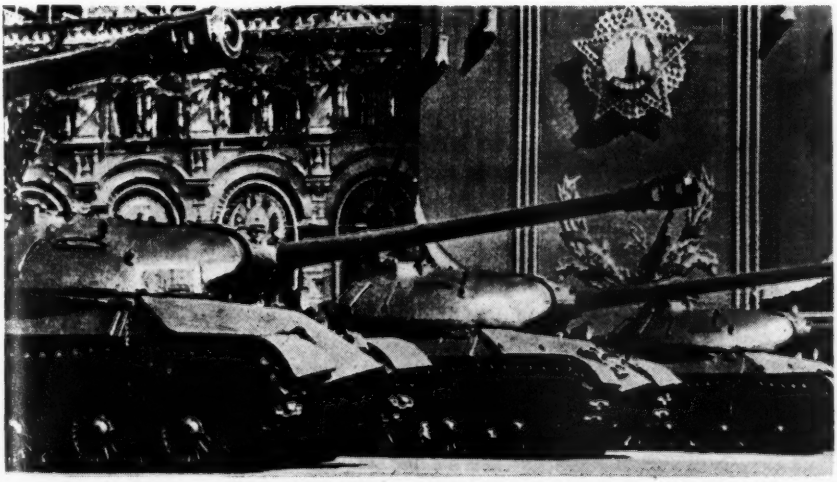
With the coming of darkness, the armored groups carrying the pursuit forces had, under the protection of the reconnaissance detachment, crossed the Solka and begun their advance over a forest road in close collaboration with the infantry battalion on the left. The infantry units which had advanced to the town of Nov. Lyalitsi, succeeded in silently overcoming the German outpost which protected the flank. Thereupon, the infantry continued its advance on the town of Karpovo without meeting any resistance. At the same time, the armored group had successfully negotiated the forest road and arrived in the vicinity of the town of Proloski without meeting any opposition. In this manner it was possible to make a surprise attack on the strong point, Opole, in the German's rear. The group commander decided to attack this point from two sides in order to cut it off from the Kingisepp highway. As regards the reconnaissance patrols, they received the order to push on to the Gulf of Finland, and obtain control over the Korpovo highway in order to prevent the Germans from using it.

At a common signal, the troops went over to the attack. The Germans had not expected that any of the Soviet tanks would appear from the direction that was now vital to them, and were therefore capable of no further resistance. Opole was taken. After leaving adequate protection behind, the group commander immediately continued on and attacked the Germans in the town of Jamskovitsi.

The group commander detached a part of his forces for the direct support of the infantry when they attacked frontally from Lyalitsi. This aid proved to be of decisive importance. The German resistance was broken by mean of the attack blows which were directed against him from both the front and rear. The town of Lyalitsi was taken, and the Germans were forced to retreat.

Because of the armored formation's skillfully executed maneuver, the infantry forces were able to break the German resistance in the next defense position, and continue their pursuit in a satisfactory manner. This operation was carried out at night and in wooded terrain, but in spite of this the tank crews showed themselves able to make use of the good operating qualities of their vehicles in this type of terrain.

Tanks recently displayed by the USSR show that adaptations have been made on models used during World War II. Above, cruiser tanks similar to the wartime T-34. Below, the chassis of these tanks resemble the wartime KV-I, with a different turret.—*The Illustrated London News photos.*



The Principles of War

Reprinted by the MILITARY REVIEW from an article in the "Canadian Army Journal" December 1947.

The ten Principles of War listed below have been adopted by the Canadian Chiefs of Staff Committee for the use and guidance of the Canadian Armed Services.—The Editor.

DEFINING a principle as a guide to conduct, the following are the principles which must always influence a Commander in war:

1. Selection and Maintenance of the Aim

In the conduct of war as a whole and in every operation of war it is essential to select and clearly define the aim. *The ultimate aim is to break the enemy's will to fight.* Each phase of the war and each separate operation must be directed towards this supreme aim, but will have a more limited aim, which must be clearly defined, simple and direct. Once the aim is decided, all efforts must be directed to its attainment until a changed situation calls for a re-appreciation and consequently a new aim. Every plan or action must be tested by its bearing on the chosen aim.

The Selection and Maintenance of the Aim must be regarded as the "Master" Principle. It has therefore been placed first. The remaining principles are not given in any particular order, since their relative importance will vary according to the nature of the operation in question.

2. Maintenance of Morale

Success in war depends more on morale than on physical qualities. Numbers, armament and resources cannot compensate for lack of courage, energy, determination, skill and the bold offensive spirit which springs from a national determination to conquer. The development and subsequent maintenance of the qualities of morale are, therefore, essential to success in war.

3. Offensive Action

Offensive action is the necessary forerunner of victory; it may be delayed, but until the initiative is seized and the offensive taken victory is impossible.

4. Security

A sufficient degree of security is essential in order to obtain freedom of action to launch a bold offensive in pursuit of the selected aim. This entails adequate defense of vulnerable bases and other interests which are vital to the nation or the armed forces. Security does not imply undue caution and avoidance of all risks, for bold action is essential to success in war; on the contrary, with security provided for, unexpected developments are unlikely to interfere seriously with the pursuit of a vigorous offensive.

5. Surprise

Surprise is a most effective and powerful influence in war, and its morale effect is very great. Every endeavor must be made to surprise the enemy and to guard against being surprised. By the use of surprise, results out of all proportion to the effort expended can be obtained, and in some operations, when other factors are unfavorable, surprise may be essential to success. Surprise can be achieved strategically, tactically or by exploiting new material. The elements of surprise are secrecy, concealment, deception, originality, audacity and rapidity.

6. Concentration of Force

To achieve success in war, it is essential to concentrate superior force, morale or material, to that of the enemy at the decisive time and place. Concentration does

not necessarily imply a massing of forces, but rather having them so disposed as to be able to unite to deliver the decisive blow when and where required, or to counter the enemy's threats.

7. Economy of Effort

Economy of effort implies a balanced employment of forces, and a judicious expenditure of all resources with the object of achieving an effective concentration at the decisive time and place.

8. Flexibility

Modern war demands a high degree of flexibility to enable pre-arranged plans to be altered to meet changing situations and unexpected developments. This entails good training, organization, discipline and staff work, and, above all, that flexibility of mind and rapidity of decision on the part of both the Commander and his subordinates which insures that time is never lost. It calls also for physical mobility of a high order, both strategically and tactically, so that our forces can be concentrated rapidly and economically at decisive places and times.

9. Cooperation

Cooperation is based on team spirit and entails the coordination of all units so as to achieve the maximum combined effort from the whole. Above all, good will and the desire to cooperate are essential at all levels. The increased interdependence of the services on one another and on the civilian war effort has made cooperation between them of vital importance in modern war.

10. Administration

The administrative arrangements must be designed to give the commanders the maximum freedom of action in carrying out any plan. Every administrative organization must be simple. Every operational commander must have a degree of control over the administrative plan within his sphere of command, corresponding to the scope of his responsibilities for the operational plan.

There must be a strategic and tactical theory of operation which shall be common to all armed forces—simple, clear, adaptable to the various forces, but reduced to essentials and sufficiently elastic to change with the incessant advances of science and industry.

General Gaetano Cardona, Italy

Search Operations in Palestine

Digested by the MILITARY REVIEW from an article by Brigadier R. N. Anderson in "The Army Quarterly" (Great Britain) January 1948.

No description of the work of the soldier in a typical cordon and search operation in Palestine can alone give the reader a true idea of what the troops have to contend with in that country. To get a real picture one must have a general background of life in the country, the attitude of the native to the soldier and, most important of all, the conditions under which the soldier lives.

Palestine under conditions prevailing over the past eighteen months has been a country of suspicion: unlike the war, when one had one's periods of rest (normally among liberated peoples who were friendly), the soldier is always on duty and alert to the fact that, at any time, he may expect a murderous attack. In conditions where the moderate Jew will not cooperate with the Security Forces it is impossible to know who is friend or who is enemy. Such conditions lead to irksome, though most necessary, restrictions such as walking out off duty armed and never alone. This is in good times, but there have been periods of weeks on end when troops have been confined to their camp except when actually out on operations.

The soldier has no social life outside camp. He has little in common with the Arab; to the Jew he is courteous, but suspicion is mutual. Such social life as he has, he has to make for himself, but even this becomes monotonous with the paucity of the female element since the families were evacuated. Navy, Army and Air Force Institutes with British female staffs are most popular, but such staffs are few and far between: the only other British women the soldier is likely to meet are the Women's Voluntary Service, whose work is so much appreciated.

What of the camps in which the soldier lives and which more than ever before he has to make his home? These were in the main built as training-camps during the war, or as rest-camps for formations withdrawn from Italy to train and refit for further battle. They are of a very temporary nature, consisting of hutted buildings for offices, messes, cookhouses and Institutes, but with all personnel living under canvas. Only recently has electric light been installed in the tents, a tremendous step forward, for now at least the soldier can read and write his letters in the one place he can call his own.

Such essentials as fans and refrigerators for the hot weather are conspicuous only by their absence. Playing-fields are generally speaking of the makeshift type, built by units themselves, and are few and far between.

Add to this the barbed wire complex, for all camps are surrounded by wire, and it will be appreciated that the soldier's home is difficult to make into a cheerful and comfortable place despite the ingenuity of Commanding Officers, to whom must be given the greatest praise for their successful efforts to maintain efficiency and, most important of all, promote happiness in their units.

To carry this background one stage further, it seems important to give some idea of the general day-to-day tasks which the soldier has to perform in the normal course of duty. For it is into this picture that a major search operation falls and not as an isolated event in his life.

Normally units are allotted sectors within the boundaries of which they are responsible for law and order. In order to maintain law and order constant patrolling both day and night is necessary

in order to give a feeling of insecurity to the "thug." Such patrols are to prevent the mining of railways, to check the shoulders of roads for mine leads, and to dominate the villages from which the "thug" may work.

A further task designed to make life insecure for the dissidents is that of snap checks of vehicles, cafes and hotels in cooperation with the police. Also in the daily task are the guarding of vulnerable points and coast-watching for illegal immigrant ships. Add to this the ever present commitment of guarding one's own camp and it will be realized that the soldier's day is a very full one. In fact, one may consider oneself lucky to be on duty only one night in three, and it is quite common to do night duty every other night for long periods.

On top of operational commitments there is the task of training the soldier for his normal duties in war—range-shooting, collective training, education; with the young soldier of today this is all-important, and, despite the difficulties, a very high standard has been maintained, as is proved by results recently seen when the 1st Infantry Division was able to carry out brigade training for a short period in Trans-Jordan.

Despite, therefore, the somewhat gloomy picture that has been painted of the conditions (and gloomy it is in fact), the background would not be a true one if it is not realized that the morale, efficiency and bearing of the soldier in Palestine is of the highest order.

Planning for a Major Search

Events in Palestine happen quickly. Unlike the Arab troubles of 1937-38, the Security Forces are faced with a well-organized, well-armed and fanatical enemy in the dissident groups who oppose them. Acts of terrorism are carefully planned and swiftly carried out, and it is normally as a result of such an act that a major search is undertaken. If action by the troops is to be of value a search has to be undertaken on very short notice.

The Jewish intelligence system is first-class and, as a result of this, previous reconnaissance of a selected village is almost certain to give the show away. Telephones are most insecure and cannot be used for planning purposes. Natives are employed in all camps, in the NAAFI canteen and as garrison engineer's laborers; it is thus most inadvisable to put anyone but those really essential into the picture until the last possible moment lest an incautious word may give the whole show away. It is thus common for the troops to be awakened at midnight (and most of them will have been on guard the previous night), hastily briefed as to the job on hand and be on their way to the scene of operations by 0300 in order to cordon off the village before daylight. It is only alertness, good discipline and good leadership that makes this not only possible but relatively easy.

In view of the impossibility of ground reconnaissance, air photographs assume enormous importance, and these are invariably used in all planning for such operations. The Palestine Police, too, must be brought into the planning stage early, as, with their more intimate knowledge of the country, they are invaluable in providing guides to take the cordon troops quickly to the line selected so as to seal off the village.

Except in major searches and operations, such as the imposition of martial law in Tel Aviv, it is unusual for orders to be written, for this adds to the possibility of leakage of information. Village searches are usually carried out at dawn, the village having been surrounded during the hours of darkness to insure that all inhabitants (and the Jew is an early riser) are present and have not left for work in the fields. The greatest difficulty is that of closing the cordon before the game is given away, and to achieve this, inge-

nuity in planning and speed in execution by the troops are of paramount importance.

To sum up, the essentials for planning a cordon and search operation are security in all stages; a simple plan which can be put into execution quickly in the dark; adequate reserves to deal with unforeseen eventualities in the early stages.

Description of a Search Operation

The operation to be described is the search of a Jewish settlement of some 2,000 inhabitants and involves the use of the major part of an Infantry Brigade. The object of the search is twofold—primarily to look for wanted "thugs" and, of secondary importance, to search for illegal arms which may be hidden in the settlement.

The following are the types of parties which may be needed:

Cordon Troops—troops required to surround the area to be searched so as to prevent those inside the cordon getting out.

Outer Cordon Troops—parties of troops placed at some distance from the village, sites at strategic points, to prevent the population of neighboring villages interfering with the operation.

Cage Troops—parties required to erect and guard the cages to which the inhabitants are brought for interrogation.

Escort Troops—troops required at the cages to escort to the place of detention those wanted persons found as a result of interrogation.

Road Blocks—may be required on roads leading to the village in order to divert traffic away from the scene of operations.

Search Parties—consisting of troops and Palestine Police: these parties enter the village with the object of collecting the inhabitants and moving them to the cages and to search for arms.

Screening Teams—parties of police who interrogate the inhabitants and who decide who are "wanted" persons.

Reserves—reserves must be maintained at all levels to deal with the unexpected.

Let us now imagine that an expert military observer has been hidden on the roof of the highest building in the village to give a running commentary on the operation.

Imposition of the Cordon

"It is 0345 and it will be dawn in three-quarters of an hour. I can see columns of traffic approaching the village, one from the south and one from the west. The southern convoy has now reached the outskirts of the village. Troops are pouring out and doubling round the village to the west and east. The western convoy seems to consist of carriers—they have left the road and are dashing over the fields round the northwest side of the village. There seem to be troops all round the village except on the northeast side—wait a minute, yes, there are troops there. They must have come across country on foot. The village is now completely surrounded.

"Only fifteen minutes now before it is light. Streams of traffic are approaching the village and parking outside the cordon.

"Now I can begin to see better. To the west and north I can see two parties of outer cordon troops who seem to have been placed between us here and two Jewish villages about a mile and a half away. Below me and just outside the cordon I see men busy with barbed wire: they are building the cage; they also seem to be erecting tents; probably these are for the interrogators and to give shade to the women and children.

"Away to the right the search troops are forming up along the cordon ready to start entering the village when ordered to do so. There seem to be police with these search troops.

"A jeep is now entering the village escorted by an armored car—it contains the Brigadier and the Police Superintendent.

Wreck of the Cairo-Haifa train carrying British troops (above) was caused by the explosion of a mine by terrorists in Palestine. Below, British troops round up suspects for questioning after an explosion which wrecked a police headquarters at Haifa.—*The Illustrated London News* photos.

They have stopped at the *Mukhtar's* (mayor's) house and are going in. Two other jeeps with loud-speakers have now entered the village; they are broadcasting to the population to remain in their houses and that the village is under curfew.

"I am now going down to the *Mukhtar's* house to see what is going on down there. The Brigadier has just told the *Mukhtar* that he has reason to believe that the thugs who blew up the railway line yesterday came from this village and that troops and police are going to carry out a search. All inhabitants are to remain indoors until ordered to go to the cages for interrogation by the searching troops. The Brigadier has made it plain that the troops will be courteous provided orders are obeyed. He has asked the *Mukhtar* to provide reputable citizens to accompany each search party to see that no unnecessary damage is done. He has just told the *Mukhtar* that he himself may move about within the village at his will during the search and told him to assure the inhabitants that there is no cause for alarm. The Brigadier has now got into his jeep and is off back to his headquarters outside the cordon.

"I am now at Brigade Headquarters. The Brigadier is interviewing three Jews. The first two are correspondents and he has allowed them to go where they please and has detailed an officer to accompany them. The third man has made a complaint that the telephones will not work and has been told that all lines from the village have been cut.

"The Brigadier has ordered the search to begin and the search troops are entering the village."

The Search

"I have now joined one of the search parties, which consists of a subaltern, an NCO, ten privates and a Palestine policeman. An elder of the village has been attached to the party to watch proceedings.

"Their first task is to search a block of flats—the policeman, who is an interpreter, has gone inside covered by the soldiers and orders all inhabitants to come outside, where they are to be collected by an escort to remove them to the cage for interrogation. Now they are streaming out of the house. The subaltern has shouted out of a window for two soldiers. They have gone upstairs to deal with a young woman of about eighteen years of age who has refused to move from her room—she is firmly taken by the soldiers by each arm and carried forcibly downstairs screaming. The house is now cleared and the inhabitants are moved off to the cage under escort. The search party is now going through the house to see that nobody is left inside hiding. This is a long and laborious job and is being done with real thoroughness—wardrobes, cupboards, all are looked into. Walls are sounded for false caches. There is a noise from the back garden. A young Jew covered with feathers has been found hiding in the henhouse. He is marched away to the cage with a special escort. Elderly persons and the children have not been taken away.

"Another search-party of Sappers is at work in the garden with mine detectors. Interest is being shown at a concrete slab near the henhouse. They have now sent for a compressor and are picking away at the slab. . . . They have now dug down some three feet below the slab and are pulling out an oil drum. The contents are being laid out on the ground, two landmines all ready for use, half a dozen pistols and two boxes of ammunition. The cache is now being photographed by an Army photographer. The search of this block of flats and garden is now complete. The cordon is being moved in, leaving the flats outside the cordoned area—this means that when the inhabitants have been interrogated at the cage and released they are free, but still cannot enter any part of the village which has not been

searched. It will take the troops a good six hours to search this village thoroughly. Let us go and see what is happening at the cage."

The Cage

Before allowing our commentator to describe what is happening at the cage the reader should know the lay-out. In fact, there are four cages. Two—one for males and the other for females—are the reception cages into which the inhabitants of the village are taken by their escorts on arrival and where they await their turn for interrogation. From these reception cages there are wired-in passages leading to the interrogation tent in which the Palestine Police screening team works. On completion of the screening the inhabitants move straight into either the "wanted" persons cage or to a waiting-cage, where they wait until orders are given for them to return to the village.

Our commentator is now approaching the cage:

"Small parties of inhabitants from the village are streaming across the open ground between the village and the cages; all are under escort. On arrival here they are split, the men being sent to a cage on my right and the women to one on my left. Just outside the cages there is a Medical Officer with a first-aid post. An interpreter is present to answer the prisoners' queries, which are referred, when necessary, to the officer in charge of the cage. An orderly with buckets is providing drinking water from an Army water cart parked nearby. All round the cages soldiers with fixed bayonets stand on guard.

"One by one the inhabitants move into the interrogation tent and are screened by the Police CID. On the table I see piles of records and photographs of wanted men. Every person has to produce his identity documents, and these are carefully checked with the records. Anyone whose identity card shows him as not being an inhabitant of the village is interrogated as to the reason for his spending the night there.

"Outside again I can see already half a dozen people in the 'wanted' cage. A soldier has handed a loaf of bread over the wire to them—a young man has grabbed the loaf and hurled it back at him!"

End of the Operation

And so the search drags on—a slow, dull and tiring business, but one which must be done with thoroughness to the bitter end. Not always are searches as peaceful as the one described: sometimes the younger inhabitants refuse "en masse" to go to the cages and have to be carried there forcibly; sometimes the soldiers are stoned; but generally speaking the Jew has now learned that whatever resistance he puts up, the soldier quietly and efficiently deals with the problem facing him and wins the day. This is done with minimum force, and as a result has little propaganda value, which is normally the object of any resistance.

Not until the screening is complete and the "wanted" men sent off under escort to their place of detention, where they are subjected to further interrogation, is the cordon lifted.

The *Mukhtar* is sent for by the Brigadier before troops move back to camp and is asked whether he has any complaints. He is asked to sign a certificate that no damage has been done. All soldiers are searched by their officers before leaving the scene of the operation, in order that future claims of looting may be refuted. As the last troops leave, the curfew is lifted and life in the village returns to normal.

Back in camp the soldier prepares himself for a continuance of normal routine—patrols must go on, and he will certainly be on guard duty of some sort within the next twenty-four hours!

Scientific Intelligence

Digested by the MILITARY REVIEW from an article by Professor R. V. Jones in the "Journal of the Royal United Service Institution" (Great Britain) August 1947.

IT is not entirely for reasons of security that intelligence is so rarely discussed in public: there is a deeper reason. Owing to the inadequate status which intelligence has hitherto been accorded in our defense system, it has rarely been able to command a staff of mental caliber commensurate with the difficulty of its problems. As a result, while much thought has been given to the principles of strategy and while penetrating treatises have been written on that subject, a coherent philosophy or doctrine of intelligence has so far failed to develop.

It is hardly surprising, therefore, that published opinion regarding intelligence is, on the whole, derogatory. Take, for example, Clausewitz. While he says that intelligence is the foundation of all a commander's ideas and actions, he goes on to state that "A great part of the information obtained in war is contradictory, a still greater part is false, and by far the greatest part is of a doubtful character."

The development of intelligence during the recent war was so vast that a coherent philosophy has now evolved. It is about this, in particular relation to my own branch—scientific intelligence, that I want to speak. My approach will be largely historical, because I know of no more convincing way of presenting the philosophy of intelligence than along the path of direct experience.

The Committee for the Scientific Study of Air Defense first drew attention to our ignorance of new German weapons. It was therefore suggested that a scientist should be attached to the intelligence branches of the Air Staff to find out what was wrong and whether an improvement could be effected. I was the scientist selected but, owing to Treasury opposition to the general proposal, the war broke out before I took up my duties on 11 September 1939.

Eight days later, Hitler made his famous "secret weapon" speech in which, in fact, he made no reference to a secret weapon. The subsequent alarm in this country was due to an error in translation, for it was clear from the British Broadcasting Company's record of his speech that Hitler was not referring to a specific weapon (*waffe*) but to the *Luftwaffe* as a whole. In the meantime it had become my task to search through all the intelligence files for possible new weapons, and while the material in the files was very nebulous, I was able to indicate that certain weapons would have to be taken seriously: these included gliding bombs, pilotless aircraft, long-range guns, and rockets. But my search through the files had also taught me how primitive was our intelligence service compared with what I had imagined it to be.

At times of alarm, such as followed the outbreak of war and Hitler's speech, casual sources crop up in large numbers. These are mainly people who, under the stress of the situation, think that they have information of value to the country. Much of the information is useless, but in the days following Hitler's speech one casual source came up whose information was of remarkable interest. It happened in this way. Our Naval Attaché in Oslo received an anonymous letter telling him that, if we would like a report on German technical development, all we need do was to alter the preamble on our German news broadcast on a certain evening, so as to say: "*Hullo, hier ist London*," instead of whatever we usually said. The writer would then know that we wanted the information and would send it to us. We duly altered the

preamble, and the information arrived. It told us that the Germans had two kinds of radar equipment, that large rockets were being developed, that there was an important experimental establishment at Peenemünde, and that rocket-driven glider bombs were being tried there. There was also other information—so much of it in fact that many people argued that it must have been a plant by the Germans, because no one man could possibly have known of all the developments that the report described. But as the war progressed and one development after another actually appeared, it was obvious that the report was largely correct; and in the few dull moments of the war I used to look up the Oslo report to see what should be coming along next.

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German Radio Beam System

In June 1940, I received the culminating information on a trail that I had been following for some months, which led me to the conclusion that the Germans had developed a radio beam system for blind bombing known as *Knickebein*. They had taken care to disguise the receiver in their aircraft as being designed for blind landing, but we managed to unmask its true purpose. The importance of this development was great. The evacuation from Dunkirk had just occurred, our air defenses, while excellent by day, were almost impotent by night, and the whole of the German bomber force could come over then and drop most of its bombs into the area of intersection of the beams which were little more than half a mile wide over London. Steps were immediately taken to check whether I was right; and on the night of 21 June 1940, a Royal Air Force search aircraft went up and detected the beams on the expected frequencies and in the expected place.

Even before we had finally found the beams we were starting countermeasures to jam them; this was the beginning of the radio war. When the beams came into serious use at the beginning of the night *blitz*, there were enough jammers to upset them, and many bombs intended for such a large target as London fell in open country. There is a story that during this period, which lasted over two months, nobody had the courage to tell Goering that his beams were jammed, for he had said, after his defeat by day, that he would change to night attack by means of the beams, which were unjammable.

It was here that I learned for the first time the danger of expert opinion in intelligence. For the same facts as I had had about *Knickebein* were also given to a scientist outside intelligence who was an acknowledged authority on the propagation of radio waves. He said that my solution of the problem must be wrong, because it was impossible to make a short wave beam which would bend sufficiently round the curve of the earth from Germany to enable it to be heard in a bomber over England. He proposed an alternative solution which was obviously unfeasible on the intelligence evidence, but which nearly led to the cancellation of the vital flight that confirmed my solution. It was only the fact of Mr. Churchill's personal order that finally forced the search to continue.

Our own experts proved so repeatedly wrong in their opinions about new German weapons throughout the war, despite the fact that in their own fields they more often than not proved superior to their German counterparts (and that is one of the reasons why we won the war) that there must have been some underlying factor in their errors. In mentioning this I have no desire to demonstrate that I was better at my own job than were the experts who often tried to do it for me, except in so far as it may make the path

of my successors in scientific intelligence easier. What was not realized is that the expert in this country on a particular scientific development is not the best man to interpret the information received from intelligence sources. He is, in fact, not a collator—he is a source. He is that source who spies on the Laws of Nature in so far as they affect the weapon under consideration; he is a valuable source, for the Laws of Nature acknowledge no political frontiers. But he is human and fallible, as are all sources of intelligence. If, therefore, his opinion conflicts with the intelligence picture as built up from the evidence of the other sources, it is certainly a case for going over this evidence again. And if it still appears reasonably conclusive, then you must go back and query the expert's evidence just as you have queried the other sources. For this reason, which the expert can rarely appreciate, the final word must not be with him; it must be with independent scientists well versed in the art of Intelligence. It is on this argument that the case for an independent scientific intelligence organization largely rests. All my experience in the war convinces me that it is sound.

Returning to the *blitz*, we had a hard fight with the beams during the last two months of 1940, after the Germans realized the fact that *Knickebein* was jammed. The cause of the trouble was a new beam system of even greater accuracy, employing an equipment with the intriguing title of the "X apparatus." We soon found what the X apparatus was, and how it worked. It was used by only one formation, *Kampf Gruppe* 100, which was intended to do precision bombing. Although we had discovered the correct frequencies on which to jam it, an unfortunate technical error rendered our jamming ineffective until almost the end of the year. In the meantime, the Germans switched *Kampf Gruppe* 100 to dropping incendiaries and so marking the target for the rest of the de-*Knickebeined Luftwaffe*. This was the beginning of pathfinding, which was later adopted also by Bomber Command. Coventry was the first target attacked by the new method, which caused a good deal of destruction until finally countered in January 1941.

With the X apparatus now out of action, the Germans tried their new trick with the "Y apparatus." This time, however, we were particularly successful, because we had it entirely worked out in advance. This was partly due to one or two lucky guesses, and partly to the Oslo report, which I had decided to trust. Whereas the X system had depended on setting up crossing beams in the target area, the Y system used only one beam, down which the bomber flew. By a special new radio method its range along the beam from the transmitting station was found, and when the bomber had reached the correct distance it was told to drop its bombs. What the Oslo report told us was that the Germans were experimenting with such a method of range-finding (curiously the Oslo report had had no mention whatever of beams), and I guessed that the Y apparatus would use this system. As a result we had several months' warning of what was coming, and on the very first occasion on which the Germans decided to rely on the Y apparatus for pathfinding they found it jammed. Thereafter they were largely forced to coastal targets where they did not need any beams, and the main danger was temporarily over.

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The Offensive

With the end of the *blitz* we were able to turn our attention more to offensive intelligence; by this I mean the production of information concerning the enemy defenses for the benefit of our own offensive. It proved a more difficult task,

for in the *blitz* we had a steady stream of prisoners, equipment and documents from crashed aircraft which would almost always, sooner or later, put us on the right track. In offensive intelligence, however, all these sources were denied to us; and as an item of intelligence I have had more regard for the work that we did in this direction than for that against the beams.

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Enemy Night Defense Radar

We directed our main attack first against the chain of German radar stations on the Channel Coast, for these were within range of our photographic reconnaissance aircraft, and also they might be picked up by radio while they were transmitting. This twin thrust achieved both results almost simultaneously, for the photographic reconnaissance unit obtained a low oblique of the first kind of German radar station almost at the same time as one of our officers first heard its transmissions in February, 1941. Having found the first one it was much easier to find similar stations, and as the year progressed we gradually built up our knowledge of the coastal chain.

The coastal chain was not of course the main belt of German night defenses; they had still to be penetrated. But this penetration was going to be a good deal easier now that we knew the characteristics of at least one type of German radar equipment. We could then plan a wider attack. We could listen to the radio-telephony conversations of the German night-fighters which were now beginning to appear on a serious scale. We could analyze this traffic, although it was naturally as disguised by code language as far as the Germans could make it, and see whether we could deduce anything about the methods of control which the Germans were using. We could also take bearings on the transmitters and so find the position of the night-fighter areas. As many of these were in occupied territory, we could then brief friendly agents in that territory to look for radar stations similar to those on the coast; and then from the pinpoints given us by the agents we could once again send out our photographic aircraft to obtain pictures and special aircraft to listen for the radar transmissions. All our available sources could thus be swung into one big attack.

It is in the planning of attacks such as this one that I believe we made our biggest advance. That they were possible is largely due to the new kinds of sources that were available to us and which we developed ourselves as the war proceeded. Given any particular problem of penetration, we would survey our existing sources and see how they could be brought in to the new attack, and what new sources could be developed specially for this attack. New weapons often inspired new sources: radar, for example, almost automatically invited the searching aircraft equipped with a battery of listening receivers, and this soon developed into a regular source.

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Work of Secret Agents

The work of some of our secret agents, notably the Belgians, was most effective. Fired at by German sentries and unable to know whether their information was getting through or what we were doing with it, they nevertheless sent us information in enormous quantity. Of all the many gallant stories I can only select one about an agent whom I had asked to pinpoint some German searchlights for us. Instead of laboriously going round the countryside finding them, he broke into the hut of the German officer commanding searchlights over literally half of Belgium and secured his map showing the positions of every

searchlight and radar station under his command. That was an enormous help. In fact it provided one of the most vital clues in the entire intelligence picture.

Toward the end of 1942, it became clear that the Germans were at last putting radar equipment into large numbers of their night-fighters. There were one or two facts concerning the actual transmissions from this equipment that we needed to confirm. Accordingly, one of our special search aircraft was asked to fly in front of a German night-fighter to see whether it could hear the transmission. It succeeded almost too well; it was attacked eleven times by a night-fighter and nearly all the crew were wounded. Our aircraft then limped home. The crew pushed their most wounded member out by parachute over Canterbury with the vital log of observations in case they should crash on landing. They then took their aircraft out over the coast again and came down in the sea, as it was in too bad condition to land. Fortunately, they were all saved.

These stories are just a few of many that happened in the course of that offensive, which culminated at the end of 1942 in a complete knowledge of the German defense system as it was. Once we had found the scientific principles and technical details employed in the equipment of the German night defense, all the other intelligence, such as order of battle, deployment and so forth, fell into place and we were given the final responsibility for fitting it all together. This is one of the reasons for the importance of scientific intelligence, because the scientific principles and technical details underlying a particular equipment determine its tactical limitations, and these in turn determine its strategic application. Once you have discovered the scientific principles of the enemy's equipment, it is therefore natural that the way he employs it, i.e., his tactics and strategy, can then be understood.

The path of intelligence, as usual, was not smooth. There were always people to challenge our interpretation of the evidence and to deny the danger of the German night-fighters. So serious did the situations become at times, when it appeared that only we in scientific intelligence could see the need of particular countermeasures, that I sometimes had to make vigorous appeals for countermeasures to be employed. It is a fact, for example, that Lord Portal of Hungerford, as Chief of the Air Staff, took me with him to the Prime Minister when the Air Ministry made its final fight to use "window" in 1943. We had, of course, been fighting to have it used for at least six months before, because we could clearly see the mounting powers of the German night-fighters; but we had a little difficulty in persuading Bomber Command that their losses were not mainly due to *flak*. And we had, moreover, found in December 1942, that the Germans knew about "window," but were frightened to use it themselves, so that there was no case against our using it for fear of teaching the Germans about it.

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The Long-range Rocket

The back of the night defense problem was largely broken just as a new threat appeared. This was the long-range rocket. The Intelligence story behind this might have been perfectly normal, because the rocket problem could have been solved, as finally it had to be, by the application of what were now becoming our standard methods of attack. But, unfortunately, another intelligence section, while correctly interpreting the early intelligence reports as indicating a long-range rocket, nevertheless caused unending trouble by barking too soon. As a result, alarm was raised and it was widely believed in May 1943, that London would within a few weeks be attacked by rockets

weighing eighty tons with a ten-ton warhead. We, having the same facts, had raised no alarm at all, beyond telling a few senior officers that we were after the rocket at Peenemünde, because we did not know enough, and certainly nobody else knew enough, to take any countermeasures. The thing to do was not to raise an alarm but to seek fresh facts—a phrase which might well be incorporated in the intelligence officer's creed.

Once again we planned our attack, and by a very long shot we got right into the heart of German long-range weapon development. It is very doubtful whether we could possibly have taken such a long shot without our previous experience with the beams and the night defenses. This incident convinced me more than anything in the whole war of the value of experience in intelligence.

Peenemünde was photographed from the air and secret agents were insinuated into the army of foreign workers at that place. One of the photographs showed what was unquestionably a large rocket, and this almost clinched the evidence. But since some of our own experts had hitherto thought such a large rocket impracticable, they argued that it was a hoax to distract our attention from more important developments. Now if it were a hoax and it succeeded, we should probably be led to bomb Peenemünde; the Germans would presumably only tempt us to do this if Peenemünde were not a genuine, serious experimental station. I finally managed to show that this was extremely unlikely from an apparently insignificant piece of evidence. This was a circular to various German Air Force experimental stations giving revised instructions for applying for petrol coupons. Now all the experimental stations were on the list of addresses, apparently in order of importance, and Peenemünde was shown on the list above some other stations of whose importance we were certain. The clerk, who could hardly have known that his little circular would come into our hands, was in fact an unconscious witness to the importance of Peenemünde. The petrol instructions, to my mind, finished the case. They showed that Peenemünde was genuine.

Bombing of Peenemünde

Following the intelligence build-up, Peenemünde was attacked by Bomber Command on the night of 17 August 1943. Here are the facts. We killed their chief jet designer and we burned up all the production drawings for the large rocket just as they had been completed for issue to industry. The Germans, worried by the damage that we had done to their experimental factory at Peenemünde (and at Fredrichshaven, which had already been bombed on our advice) decided to put their rocket production underground and to move their experimental work to Poland. The culminating effect of all this must have meant several valuable months' delay; but for this, the rocket might well have preceded the flying bomb. We should have been subjected to a longer attack at shorter range (the rockets were never fired, as intended, from France), and our defenses would have been worried by two kinds of attack at the same time. There can be no doubt that the Peenemünde raid was worth while.

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Future of Scientific Intelligence

From 1941 onwards, whenever the military situation turned in our favor, up sprang a crop of postwar planners who had chosen not to concentrate their energies on the war in hand. They hardly affected us, however, before the summer of 1944; but with the spring of 1945 they took great interest in our future. A committeee was appointed by the Joint Intelligence Committee to examine the future of scientific intelligence. I was a

member of that committee—the only one, with the exception of an Admiralty representative who had been doing scientific intelligence for the Admiralty for eighteen months previously, with any experience of the subject. And, remarkable as it may seem, few members of the committee had more than a few months' experience with any form of intelligence whatsoever. It is an almost incredible fact that, in a subject where experience counts perhaps more than anywhere else, personalities change in the service intelligence departments at a kaleidoscopic rate. In my seven years working in air intelligence, for example, I had five successive masters, and I believe that the other services change heads of intelligence at something like the same rate. The main question at issue was whether postwar scientific intelligence was going to be along the lines on which I had developed it, or was it going to be forced into the framework of orthodox intelligence.

Despite all the facts to which I could now point to show that, while my system was unorthodox, it nevertheless produced the results when the orthodox method had failed. I was over-ruled; and in six hours the experience of six years was jettisoned. Scientific intelligence is now done by three separate sections, one with each of the services; none of them has the contact with the sources that I had. I doubt whether they have as good a contact with their own services, for by a peculiar concession to my view that it really was one big job and not three parochial ones, the rest of the committee decided that they should be housed together in inadequate premises in a remote part of London, near neither source nor service. The heads work as a committee under the Joint Intelligence Committee which, nevertheless, not infrequently over-rules them.

Committees are not the way to run intelligence. They have their proper uses, and we must not forget that we owe our origin to a committee. But intelligence is conducting a perpetual attack, and an attack needs a single commander; the annals of our services have often proved that. Moreover, a committee cannot compile an intelligence report—it can only go as far as common agreement will allow—and common agreement never goes far enough. An intelligence picture is a work of art, and no committee has ever turned one out.

For these reasons, it became impossible for me and my staff to continue; we accordingly resigned as a last protest.

I attribute the rejection of our system mainly to the lack of experience on the part of the people who rejected it. They had little experience because of the way in which the senior posts in our intelligence services change so rapidly. And these change so rapidly because intelligence has no proper status. It is not graded as a specialist job as is, say, Signals, and the intelligence officer is classed as "administrative and special duties." As a result, while our Signals organization is stable and has been characterized by some distinguished leadership, one of the main considerations of a general duties officer in intelligence is how long he will have to stay there before getting back to a post with better chances of promotion. It may be argued that intelligence is too small a branch in that the top level could never be very high. One answer to this is to include all the service intelligence branches and all their ramifications into one large intelligence service, with posts large enough at the top to offer a just reward for the kind of officer intelligence needs—those with the greatest intellectual powers of any. This may be a long time coming, but I am certain that if we are involved in a future war, it will be found necessary to amalgamate scientific intelligence again. I hope that this will be realized in time and, though any committee may now reject our philosophy, I am confident that this philosophy will outlast the committee.

Problems of Organizing the Brazilian Air Force

Translated and digested by the MILITARY REVIEW from an article by Major Aldacyr Ferreira da Silva in "Revista do Clube de Aeronáutica" (Brazil) January 1948.

THE Brazilian Ministry of Aviation, created in January 1941 when aviation was entering the period of its most rapid development and greatest change, assumed the responsibility for all air activity in the nation.

The accomplishment of this enormous task was rendered difficult from the beginning by a number of factors of vital significance:

1. The Ministry was formed from diverse elements of the Ministry of War, the Ministry of the Navy, and the Ministry of Transportation, each with its peculiar directives, legislation, and fixed doctrines.

2. The Ministry of Aviation was created during the period when the world was entering on the greatest war in history and when the aviation of leading nations was undergoing daily changes, frequently altering their methods and doctrines which had been regarded as the most perfect attainable up to that time.

3. There were the problems of the vast extent of Brazilian territory, the lengthening of our supply lines, and the restrictions of a period of the war in which, generally speaking, only air transportation of limited capacity was operating.

4. Finally, there was the rapid development of commercial aviation and the consequent development of the air safety service, which had previously been administered separately by the ministries and commercial institutions.

With its task rendered difficult by these factors, Brazilian aviation had two great problems to solve at once: lack of personnel and lack of equipment. These were solved by successive measures, such as the creation of the C.P.O.R. Aer. (Air Reserve Officer Training Center), the E.T.AV. (Aviation Technical School), and the Purchasing Commission in the United States.

Naturally, when the war was over and the situation became stabilized, total reorganization was necessary, and this was accomplished in 1946.

Of the various possible ways in which the Ministry of Aeronautics could be reorganized, the one shown below appears to give the necessary importance to the air echelon of the Brazilian Air Force, being well adapted to the modern tendency toward specialization, and permitting, among other things, the following:

1. Flexibility, which is so necessary to air units.

2. Economic employment of personnel and matériel.

3. Unity of doctrine and standardization of instruction in the various existing types of aviation.

First considering the Ministry from the point of view of its civil and military aspects, we shall divide it into: Civil Aeronautics and the Brazilian Air Force.

Civil Aeronautics:—Supervising all the activities of civil aviation, this organization includes the following:

DAC (Directorate of Civil Aeronautics), the controlling agency of civil aviation in general in matters pertaining to laws, regulations and standards.

DPV (Directorate of Air Safety), the agency in charge of the general air safety network throughout the country, and whose facilities exist for the benefit of all planes in operation (see also DPV of the FAB).

Brazilian Air Force (FAB):—The FAB, as constituted under this plan, is as follows:

FAB	Command and Staff	1. Fighter Command
		2. Bombing Command
		3. Patrol Command
		4. Transport Command
		5. Aviation cooperating with Army
		6. Aviation cooperating with Navy
		1. Territorial command, 1st Air Zone
		2. Territorial command, 2d Air Zone
		3. Territorial Command, 3d Air Zone
		4. Territorial Command, 4th Air Zone
		5. Territorial Command, 5th Air Zone
		1. Directorate of Personnel
		2. Directorate of Matériel
		3. Directorate of Medical Service
		4. Directorate of Instruction and Training
		5. Directorate of Quartermaster
		6. Directorate of Engineering
		7. Directorate of Air Safety

The air commands, taking that of Fighter Aviation as an example, are constituted as follows:

Command and Staff, Fighter Aviation	Fighter School
	First Line Units
	Second Line Units

The Fighter School, for the training of all fighter pilots, will make use of the best fighter matériel possessed by the FAB, the number of its personnel and the quantity of matériel being contingent on:

1. The number of pilots (or bomber crews) to be trained.
2. The program to be carried out.
3. The time determined for completion of the program.
4. The availability, in recent years, of this or similar matériel in the FAB.

First line units are those which make use of equipment equal to that used by the Fighter School. They will differ from units engaged in battle only in the extent of their operations, which must be on a smaller scale, not only because of economy, but also out of considerations for the personnel, which must always be in good physical condition.

The fact must be taken into account that before any declaration of war there exists a period of increased political tension during which the activities of the units will be accelerated in order to heighten the degree of training for every man.

Second line units are those which make use of matériel already considered obsolete for first-line units, or training equipment which is best suited for the execution, if not of all, at least of some of the fighter missions. Their training program will comprise all the missions their planes are capable of executing; their rate of activity will be the same as that of a first-line unit. They will constitute an economical reserve in the form of a unit which is already organized with personnel already trained in the Fighter School. In case of war, by change in equipment and a short period of readaptation, they will form units which are ready to enter the first line. This conversion will always be more rapid and more easily effected than the organization of entirely new units with personnel yet to be trained.

The number of first line and second line air units will depend on the personnel and equipment available in the FAB.

When the number of air units is great, or when the situation of the nation calls for it, air brigades will be formed within the commands, by combining various air units.

With the entrance of the country into a state of war, air divisions or theater air forces will be created by the combination of the air brigades of the various commands, with the new units ceasing to be subordinated to the commands.

The commands will continue to operate as agencies for the training of personnel and for modernization, standardization, and dissemination of rules and doctrines. They will be quickly placed in possession of all information gathered relative to enemy aviation and the results obtained in battle by both the friendly and enemy tactics and strategy. On the commands will devolve the research and experimental work in connection with military aviation and they will be in authority to command any change in the methods of employment of their aviation on the basis of developments and results obtained on the fighting fronts.

The air commands will be stationed in

certain areas of the country which may support one another or not, and which, furthermore, are independent of the territorial limits of the air zones.

The selection of the region in which each command is stationed will be on the basis, among other things, not only of the importance of this region with relation to the type of aviation belonging to the command, but also the distance from the repair shops charged with the maintenance of its equipment. In Brazil with only short supply lines we should be able to have a maximum of aircraft at our disposal in a minimum of time.

In order that this organization may possess the necessary flexibility, all the presently existing detachments, air bases, and landing areas will be considered as landing areas with:

1. A command.
2. An air safety system governed by the importance of the area's air traffic.
3. A medical detachment.
4. Maintenance service, very important for all installations and equipment.
5. Guard forces depending on the importance and size of the area to be defended.
6. A quartermaster service for receiving equipment and supplies sent by the air zone, for disbursing funds, for assuming responsibility for the area, and for furnishing rations.

The commander of the landing area will have at his disposal the rations drawn and sent by the air zone, a small quantity of rations for use in emergencies, and a liaison plane.

The strength of each of the six sections which make up the landing area will be variable, some sections not being required in some areas.

The air unit will dispose its air and ground units, comprising the A-1, A-2, A-3, and A-4, in such a way that any change of location on the part of the organization, with all its equipment, will be easy and rapid, by the use of standard tables for crating and transportation.

Whenever a landing area is designated as the permanent location of an air unit, it will pass to the control of the air command of that area and will undergo the following transformations which will continue as long as the unit is located there:

1. The area command and guard force will be included in the A-1 of the unit.
2. The air safety system will be included in the Air Traffic Section of the A-3.
3. The local quartermaster unit will be incorporated in the Quartermaster formation.
4. The medical detachment will be incorporated in the Medical Center of the A-4.
5. The maintenance service will be formed by the Maintenance Section of the A-4.

The duties of the territorial commands will be as follows:

1. Maintenance of the landing areas which have no local air units, including the drawing of pay, rations, and dispatching supplies to the areas.
2. The recruiting and training of soldiers.
3. Inspection of supply, maintenance, medical, ground training, and air safety agencies within the air zone, which will be technically subordinate to the respective directorates. Agencies which are directly subordinate to the air commands are excepted.

Among the directorates, the only one which requires special notice is the directorate of air safety.

The DPV of the FAB (Directorate of Air Safety, Brazilian Air Force) will also include, initially, the elements destined for civil air safety, which will later become separate from it when there is trained civilian personnel in sufficient numbers for its operation. When this separation occurs, we shall have three situations to consider:

1. Landing areas which do not possess local units and which are regular stopping points for commercial aviation.
2. Landing areas which possess local units and which are not regular stopping points for commercial aviation.
3. Landing areas which in addition to being occupied by local air units are regular stopping points for commercial aviation.

In the first case, the program of air safety will be administered exclusively by the civil directorate of air safety. In the second case it will be administered exclusively by the Directorate of Air Safety of the Brazilian Air Force and will be tied in with the general air safety

service, which is provided by the civil directorate of air safety, operating on the same frequencies and following the same general rules applying to air traffic.

In the third case, the air safety service will be civil, the air unit possessing its "operations," which will give flying clearance to its planes, and be subject to the following conditions:

1. Clearance for local flights, which will require of the pilot only that, when he starts his engine, he will call the tower and give the number of the plane or the name of its commander, or the number of his mission and number of his training zone.
2. Clearances for cross-country flights, which will require the visa of the "operations" of the civil directorate of air safety, for reasons of general security. This visa may alter the clearance in accordance with the flying data on other planes in operation, for which the air unit "operations" is responsible.

Summarizing the above organization, we are of the opinion that the Ministry of Aeronautics should separate civil aviation from military aviation and that the latter should be subdivided into administration, territorial commands, and air commands. In this manner we shall create a military air force which is efficient, economical and ready to be used promptly, in any theater of operations.

German Airborne Troops in Combat

Translated and digested by the MILITARY REVIEW from an article by Captain Liddle Hart as translated and reprinted in "Ejercito" (Spain) January 1948.

THE British position in North Africa was seriously threatened while they were engaged against the Italians and Germans. The most serious of these threats was the German attack which was being planned against Gibraltar.

General Student, commander of the German airborne forces, stated that in July 1941 he was ordered to plan an attack against Gibraltar to capture it with a detachment of paratroopers. The general finally concluded that the task was too difficult to be left to the paratroopers alone. He stated that Gibraltar could not be conquered if the Germans were to respect Spanish neutrality.

The original plan to use the paratroopers was revised into a much broader one for taking Gibraltar by a ground attack. According to the plan, it was intended to have eight divisions from France move south across Spain. It was necessary to have the Spaniards agree to let the Germans move across their territory, but Franco refused despite Hitler's efforts to persuade him. Thus ended the threat to Gibraltar.

Hitler was not very much in favor of attacking Crete. His main desire was to finish the Balkan campaign just as soon as the German forces reached southern Greece.

General Student, however, proposed a plan to capture Crete by means of an operation utilizing only airborne troops. Goering became aware immediately of the importance of this plan and sent him to see Hitler, who finally agreed to the operation.

For this operation the Germans utilized their one airborne division, their one glider regiment, and one division of Alpine scouts who had had no previous experience or training in air transported operations. Of the 22,000 men who participated in the operation, losses ran very high—4,000 dead

or missing, not including the wounded. The few British armored cars which were in Crete at that time inflicted serious damage during the first days of the operation. Fortunately for the Germans there were no more than two dozen of these cars. Although it was a surprise attack, the Allied infantry—composed mainly of New Zealanders—offered strong resistance. Hitler was deeply affected by the heavy German losses and determined that the era of the paratroopers was over. He refused to believe the reports that the Americans and British were developing new airborne offensive tactics. The fact that no paratroopers participated in the Dieppe raid assured him in his theory. He did not change his mind until after the capture of Sicily by the Allies in 1943. Highly impressed by the successful employment of airborne troops by the Allies, he ordered an expansion of German airborne forces, but this move was too late. By that time the *Luftwaffe* had lost control of the air, and airborne troops cannot be safely employed against an enemy who has attained air superiority.

In retrospection of the events of 1941, General Student stated that when he induced Hitler to accept the plan for the invasion of Crete, he proposed at the same time to follow it with the conquest of Chipre, which in turn would be followed by the capture of the Suez Canal. But Hitler refused to employ airborne troops again after the heavy losses experienced in Crete.

A year later, nevertheless, Hitler accepted and approved the plan for the operation against Malta. This was April 1942. The plan was for the Germans to attack the island simultaneously with the Italians. The German and Italian airborne troops were to be reinforced by Italian invasion forces of from six to eight divisions, which would arrive by water.

The last conference pertaining to this operation was held at Hitler's general headquarters on 1 June. The day before the conference, however, Hitler had an interview with a General Gruwel, who had recently arrived from North Africa and submitted to him a very unfavorable report concerning the condition and morale of the Italian troops. Hitler was immediately alarmed at the thought of the British Fleet appearing in the area, causing the Italian fleet to return to their bases, and thus leaving the German airborne troops abandoned and unprotected. In view of this possibility, Hitler decided to give up this plan.

This decision had still more significance because Rommel had just attained an outstanding victory over the British in North Africa, recapturing Tobruk and causing the Eighth Army to withdraw from its positions at Gazala. Making the best of this advantage, Rommel advanced until he was within sight of the Nile Valley.

When Rommel's advance was held up by the British at El Alamein, he realized that it would be difficult for him to defeat them except by means of a surprise attack, but he could not devise a plan to attain that surprise. He also realized that he had gone too far with his limited forces and over-extended lines of communications, but his exploit had been so sensational that he could not think of withdrawing. He had to stay there, and did until the British assembled enough forces to drive him from his positions.

Rommel said later that he did all he could to retain the positions under the difficult circumstances the Germans were facing, because a withdrawal could not be considered before the British initiated the offensive. The Germans would have been able to carry out an effective withdrawal, regardless of Hitler's orders, if it had been possible to use the supplies captured at Tobruk.

The Future of the Battleship

Digested by the MILITARY REVIEW from an article by Raymond V. B. Blackman in "The Navy" (Great Britain) April 1948.

IT is the considered opinion of the great majority of senior naval officers that the day of the battleship, as we know it today, is done, and that *HMS Vanguard* is the last of her type to be built. There is a possibility, however, that an instrument of sea warfare quite as big as the battleship may be evolved to take its place. There will always be the capital ship, for the capital ship is simply the largest and most formidable warship which a nation can afford or finds it necessary to maintain.

At a recent press conference the First Lord of the Admiralty said that "we still retain battleships, and still think they are of great fighting value," but it is significant that ten capital ships, or two-thirds of our battle strength, have been stricken off in the last two years.

The *Warspite* was scrapped in a blaze of publicity, and the First Lord announced that five more capital ships are to be scrapped, the battleships *Nelson, Rodney, Queen Elizabeth* and *Valiant*, and the battle cruiser *Renown*. But what the First Lord did not disclose was that the names of four more battleships, the *Malaya, Revenge, Ramillies* and *Resolution*, were quietly removed from the Navy List some two years ago and have not been reckoned as fighting ships since. This leaves us with only five battleships, the *Vanguard, Duke of York, King George V, Anson* and *Howe*, of which none are in operational service and all are at present immobilized, though two are being used as training ships.

There is plenty of support for the belief in the aircraft carrier as the capital ship of the future, but here again of our twelve completed aircraft carriers (six fleet and six light) only two light carriers, the *Triumph* and the *Ocean*, are operational at present. All the remainder are laid up in reserve or immobilized, though two fleet carriers were recently employed, the *Implacable* on training duties and the *Illustrious* on trials and trooping. The *Victorious* has been converted into a training ship for young seamen, and naval aviation has no longer any use for her.

We shall always need cruising ships for protecting our trade routes, police duties, and showing the flag, and as our main surface strength in wartime, but no fewer than twenty cruisers have been scrapped, demilitarized or transferred to other navies since the war ended, and the First Lord announced that seven more cruisers are to be disposed of shortly.

This will reduce the Royal Navy's cruiser strength to only thirty ships. Before the war we had sixty cruisers. It is apparently deemed to be sufficient to keep sloops on foreign stations where formerly we maintained cruisers.

Some people find comfort in the fact that we are to retain in service slightly more submarines (sixty-five) than we had before the war. But submarines cannot take the place of surface ships whose job it is to contain the enemy and maintain our sea communications. The submarine is truly the weapon of the weaker power, and a large navy uses it as a defensive rather than an offensive weapon.

The chief value of the submarine is still its cloak of invisibility which enables it to operate in waters denied to surface ships. Another valuable quality today is its increased endurance under water. The "Snort" enables it to remain submerged for long periods. The latest submarines are being tested in both tropical and arctic waters.

The justification for existence of our strong submarine fleet, however, is not to

pursue submarine warfare, but to perfect anti-submarine measures. Submarines are being developed and their crews trained to the highest pitch of efficiency so that our anti-submarine craft—destroyers, sloops, frigates, corvettes and smaller vessels, of which there must be a great many to counter a large enemy submarine fleet, may be correspondingly developed as submarine hunters and killers.

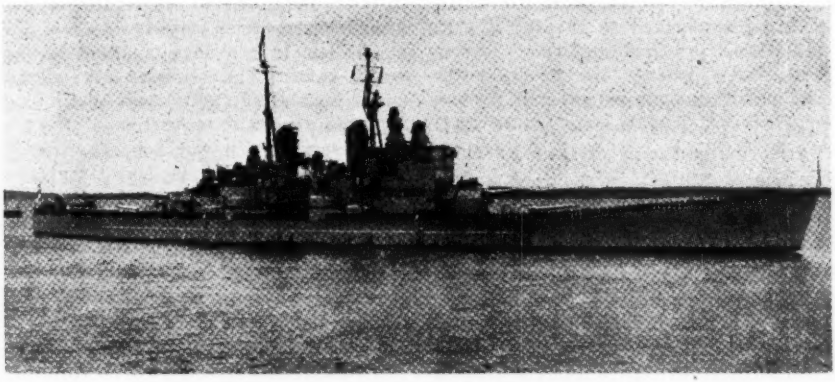
Submarines of a revolutionary type are in course of development. They will have a speed and underwater endurance which before the war would have been believed impossible. A number of submarines of a new class may be laid down in the Royal Dockyards in the near future. Four midget submarines are being retained in service. Midgets can penetrate where normal submarines cannot. A Fairmile Type "D" Motor Torpedo Boat is being converted to our first post-war anti-submarine prototype craft.

Of other new construction there is little or none. No battleships are being built. Twelve aircraft carriers are nominally under construction, but their completion is not being pressed and in most cases has been entirely suspended. The three cruisers which were being built are also at a standstill. Only eight destroyers are projected.

Some 1,250 ships of the Royal Navy have been put out of commission, about 500 are laid up in reserve, 450 have been sold, lent or otherwise transferred to other navies, 200 have been scrapped (not including small vessels or coastal craft) and 100 are being used as targets.

Senior naval officers are agreed that there will be no more Jutlands. In a future naval war there would have to be the closest possible liaison between, and integration of, submarines, anti-submarine vessels and aircraft really suited to naval requirements. At the same time, as the most elementary precaution, while other naval powers retain battleships so must we, and of sufficient number to contain the potential enemy.

The recently announced scrapping of five capital ships has cast down the Royal Navy into the slough of despond, not so much on account of the actual ships concerned, but because it comes as the finale to the great tragedy enacted since the end of the war—the relegation of the Royal Navy, the strongest in the world up till 1939, to something approaching a second-rate navy.



***HMS Vanguard*—The last British battleship?**

British National Service

Digested by the MILITARY REVIEW from an article by Cyril Falls in "The Illustrated London News" (Great Britain) 19 April 1947.

COMPULSORY service in the armed forces, to which Britain is committed for a considerable time, is not in the broadest sense a party issue. It is indeed opposed by the small Liberal Party, but it is sponsored by the Government, which is formed by Labor, the predominant party in the House of Commons, and it is supported by the Conservatives, the second party, which provides the Opposition. Were that the whole story, the issue would be simple, but it is complicated by the fact that a considerable proportion of the Government's own supporters are opposed to the principle of compulsory national service.

The bill provides for compulsory service from the beginning of 1949, by which time the transitional arrangements now in force will have come to an end. The original provision was one of eighteen months' whole-time service, followed by five-and-a-half years' service in the reserve, during which each man would be compelled to do a minimum of twenty-one days' training in each year and a minimum of sixty days' during the whole period. A range of from eighteen to twenty-six years during which the "national service man," can perform his service is a welcome concession to the demands of higher education and apprenticeship, though the necessary safeguards are prepared to prevent evasion of service. The only exception to be made is in favor of underground coalminers, who will not be called up during the next five years. The shortage of coal is good reason enough for this exemption, but it is to be hoped that it too will be protected from abuse. As a principle it is not desirable.

It had been discovered by experiment that voluntary recruitment, though improving recently, would not produce enough men to meet the country's present obligations or the demands of its military policy. Apart from that, it was necessary to provide a strong trained reserve, so that we should not revert to the situation in which we found ourselves after World War I, when our embodied forces were reduced almost to vanishing-point, and we ceased to possess a reserve potential as soon as the soldiers who had served during the war became too old or forgot their training. During the debate the government spokesmen utterly rejected the suggestion that twelve months' service would suffice. The Minister of Defense, stated that after twelve months' training at home a certain proportion of the national service men would be required to serve abroad, though he added that this was only a temporary expedient.

I am in favor of compulsory national service, which does not appear to be avoidable at the present time. Yet I feel considerable sympathy for those who voted against the measure. Conscription is opposed to all their ideals and traditions. The theory that conscription is the democratic method of service and that there is something not quite creditable in wholly professional fighting services, which has been prevalent on the continent for at least a century and has extended to the left wing, has never made much headway in Britain, certainly not in the Labor Party. I consider that their attitude was more to be honored and more logical than that of those who voted for the second reading yet coupled their support with pressure for a reduction of service to twelve months. To my mind, there was nothing "crack-pated" in the opposition to conscription, but I confess I fear we have reached a situation which can only be described as ridiculous, since the pressure exercised against the government has

now left us saddled with conscription, but at the same time so emasculated it that it loses much of its value.

As there has been no change in world problems or world conditions since Mr. Alexander told the House of Commons that eighteen months' service was essential, we must assume that it is still essential to the proper working of the scheme. This would mean that after the new system of national service had been at work for one year, on 1 January, 1950, we should begin to feel a shortage. I am unable to say whether the abandonment of the eighteen months' period will lead to the abandonment of the intention to send a proportion of the national service men to foreign stations. If it does, then we may not be able to hold these stations in the minimum requisite strength; if it does not, then these troops probably cannot be sent farther afield than Germany, since it would be improper to send them abroad until they had received some nine months' training, and it would be uneconomic to send them any considerable distance for a period of only three months.

Leaving the question of foreign service out of account, there is another important point to be considered, the value of the national service man as a reservist. The Minister of Labor remarked upon the necessity of building up a well-trained reserve. We must, he said, maintain a reasonable state of preparedness, in case we were ever called upon to defend ourselves in war. My own view, which I know to be shared by many others who have studied the subject, is that it is extremely doubtful whether even the average man who is not a specialist can be made so efficient in the course of a year's training that the knowledge and experience gained will stay with him with the aid of the refresher training in the various reserves. As to the specialists, the most that can be hoped is that their training will give them a certain extra value as reservists. There can be little or no prospect that it will render them useful for the maintenance of their respective services before their year is up. I have always felt that the eighteen months period might eventually be cut down to fifteen, without a serious loss except numerically, but twelve I regard as too short to make the average man full value for the great expense involved in his training.

It must be recognized that the recruit passes through a number of stations, in each of which there is a certain period of settling-in and routine before he commences serious work. Many angry letters are addressed to the press protesting against time being wasted in fatigue, but the writers do not answer the question who is to do the duties of the internal economy of the forces. There is no large labor pool on which to draw for the purpose, and there would be an outcry if labor were taken away from the vital tasks of civil life. And yet something can doubtless be done to fit more instruction into the available time. To my mind, one of the first considerations of those responsible for the training of the forces should be to revise their plans and programs in such a way as to make the whole process less leisurely. They should try to make the training as intense as possible by concentrating upon essentials and cutting out the time gaps between the various forms of instruction given to the national service man. It is an unfortunate situation, due to political exigencies, but their job is to make the best of it, and it is probable that careful planning will enable them to get better value from the time at their disposal. It also goes without saying that the utmost possible benefit should be obtained from Territorial and other reserve training. At one time greatest emphasis was laid upon creating a holiday atmosphere for these, but that I fear, we can no longer afford to do.

Then the service authorities will have to turn once more to the voluntary element. Here the situation is not altogether unhopeful. The voluntary intake of the forces has recently increased by about 70 per cent. More young men of all ranks are finding that, as compared with civil life, pay and conditions are not as unfavorable as they appeared when almost the sole thought in the minds of all who had been on active duty was how soon their release group would be reached. The numbers on a regular term of enlistment are still small—only 100,000 in the Army for example—but if service can be made attractive to the national service men there are likely to be plenty of re-engagements. And when I say attractive, I mean interesting and inspiring, not soft. Armed forces which are not thoroughly fit physically and capable of enduring exertions and even hardships are of small value, because they cannot be used profitably in time of emergency without a special "toughening." The experiment upon which we are entering is one which demands leadership above all else, and which cannot succeed unless it gets leadership of first-rate quality. It is always regrettable when foreign affairs and defense are brought into the arena of party politics. It seemed that there was a prospect of keeping both of them out of it in the period immediately following the war, and at least they have neither of them become a field of controversy between the two main parties. They have, however, been brought in further than is desirable owing to conflicts of opinion in the government's own ranks. I frankly regret the concession which the government has considered itself bound to make, but I hope we shall now be allowed to go ahead on the basis of a steady policy and to get the utmost out of the sadly abbreviated scheme which is left to us.

If all persons who are physically and mentally fit must be employed in war, as experience indicates they must be, it will be agreed that the military system should permit the utilization of these men on very short notice in order to be in accord with the speed of operations of the future.

General Tristao A. Araripe, Brazil